THE

MARYLAND FARMER:

DEVOTED TO

Agriculture, Horticulture, and Rural Economy.

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FLAX—ITS CULTIVATION AND VALUE.

When we think of *Flax*, our minds go back to the recollections of boy-hood days, when our good old grandmother's, whether of low degree or "hye qualitie," spun flax, to manufacture into garments or knit into stockings. Those were truly independent days, when household industries entered so largely into the saving of expenses, and contributed so much to the comfort, of the family. At one period it was so universal a custom, for every female "*To twirl her distaff*" that, *distaff* was used by poets and other writers to symbolize *woman*. When King Cotton made his appearance, and improved machinery was invented, flax and the distaff, like many other notable and praise-worthy industries, disappeared. However, the value of flax, has of late years been appreciated and its culture increased very rapidily, as its varied and important uses render it highly profitable as an article of commerce.

Notwithstanding the large amount of flax grown at home, we imported the past year $447,229 worth of flax-seed and yet, during the same time, we exported oil-cake to the amount of $487,798.

ITS CULTIVATION.

We gather from various sources the following facts and experiences, as to the mode of culture most approved. While the Western and North-Western States with new and rich soils, produce the largest crops, any good corn land in the Middle States yield a very remunerative one. Maryland and Virginia and other States have thousands of acres equally adapted to the production of this crop, as are the Western lands. An intelligent cultivator of this valuable plant says, in a report to the Illinois State Board of Agriculture, 1871: that while flax will do well on a variety of soils, it can only be brought to its fullest perfection in a rich, deep and moderately moist soil, containing much vegetable matter. The land should be well plowed and brought into nice condition. The preparation of the ground and the seed sown as early as possible after all danger of frost has passed. Harrow in the seed and roll with a light-roller. If fiber be the object of the crop sow evenly two bushels of seed. If *seed* be the object, a half bushel per acre will be sufficient—pure, good seed should be selected. This is known by the seed being bright, pump, smooth, very slippery and heavy enough to sink in water. The interior of the seed, when broken open should present a yellow-greenish appearance, and taste oily and sweet.

If the finest fibre be desired, harvest the crop as soon as the blossoms have fallen off. The plants are then bound in small bundles and immediately submitted to the water rotting process. If for dew rotting, let the plants stand until the seeds are ripe, then harvest, bind in bundles, dry and put in stooks until the time for dew rotting, about the middle or last of October.

If for seed, the crop should stand until ripe, and then treated in the same way as is the oat crop. Ten bushels of seed and 600 lbs. of fiber is an average crop,—but on the fertile lands of the West, much larger yields are made.

As to the profits of flax culture, the same authority states that in 1870 the farmers of Champaign County, Ill., sold their flax straw at a price which paid all expenses of raising the crop, and had left 10 to 15 bushels of seed per acre, for profit; the seed sold at $2.50 per bushel.

USES OF THE FLAX CROP.

This is one of the few crops grown, of which nothing need be lost. The stems form a valuable fiber, the seeds furnish the pure linseed oil, and the refuse, or *oil-cake*, left after the oil has been expressed, is one of the most valuable fat forming articles of cattle food that the farmer can obtain, and sells high. It is exported in large quantities, although yearly increased in its consumption in this country. The seeds are used extensively in medical practice.

In view of the ease with which this crop can be

grown, and the varied uses to which it is applied, furnishing a demand at all times for all its component parts, whether manufactured or unmanufactured, it might be well for our planters to experiment with it, as it might be found to be a valuable agent in making up any deficit in the gross amount of a *speciality*, such as tobacco, wheat, &c. It is for that purpose we have called the attention of our readers to this long neglected but very valuable fiber and food plant.

FISH-SCRAP.

We have often been asked, by farmers, what is *fish-scrap?* What are its uses, &c.? Hence we infer, it is not generally known or its qualities appreciated. We shall here endeavor to give its origin, and all that we know of it. From the experience of a large number who have tried it in various ways, and from its constituent elements, we deem it a cheap yet a valuable fertilizer, especially for light, sandy soils. Its powerful effects on such soils, on Long Island and in Jersey, first attracted public attention, and it became a chief ingredient, mixed with South Carolina phosphate, of the Mapes Co's famous "Mapes' Super Phosphate."

In the Long Island waters there are enormous quantities of small fish, averaging only a pound or less each, but rich in oil. These fish, known as the Banker, Menhaden or bony fish, unfit for food, are caught in enormous quantities, sometimes as many as a million are taken at one haul of the seine, which amount will yield from 500 to 1500 gallons of oil. This oil is sold under the various names of the oils it is used to adulterate. The fish are boiled or steamed, and most of the oil thus *tried* out, when the fish are taken out and subjected to a hydraulic press adapted to the purpose, so as to extract all the oil left in the fish. The refuse consisting of meat and bones, thus pressed tight, is called *fish-scrap.*

This scrap, rich in nitrogen, is used in large quantities to nitrogenize the various fertilizers which are manufactured and sold under various names.

This fish-scrap may be used by the farmer, by itself, first pounding it up or passing it through a cob-crusher, and placing a small quantity in the hills or on the hills of corn, or sowing 3 or 400 lbs. per acre, mixed with some plaster, broadcast, and harrowing it in with a Thomas' Smoothing Harrow, or other harrow. It can be sown before or after the grain, corn or other grain has been planted. It is said to be a remedy against worms.

Another way, is to compost it with stable or barn-yard manure, under-cover, with some plaster and salt. Turn the heap often, and let lie in pie some weeks. It can be also composted with marsh mud, woods earth or decayed turf, or only earth, all of which should be dry, and to which plaster and salt may be added. If necessary, moisten the heap with soap-suds or brine.

In addition, we give an excellent formula, for the guidance of the farmer, furnished us some time ago by an intelligent gentleman who deals largely in fish-scrap and other fertilizing constituents. It will be found on page 71, Vol. 10, of *Maryland Farmer*, as follows:

1 Ton Fish-Scrap	$25 00
1 " Bone Dust	40 00
1 " Salt	10 00
1 " Plaster	10 00
4 Tons cost	$85 00

This is only $21.25 per ton. Say $22 per ton for the compost, of which 400 lbs. would be sufficient for an acre, and this would be $4.40 per acre.

Where can so excellent a manure be found at so small a cost? This compost can be made under shelter on rainy days. It is easily made requiring no skill or science. Its effects would be immediate yet permanent; not evanescent, like some fertilizers, but perceptible for years.

It would be well for some of our farmers who will not buy fertilizers, because they say that the manufacturers impose worthless articles on them, to try this, in which there could be no deception, as they would themselves manipulate the different constituents of the fertilizer, each in its separate pure state.

MORE PRACTICAL EDUCATION.

There are, in our country, many Colleges and Universities, of a high order, which educate more particularly for Literary and Professional life, and mercantile business, but the country lacks in the number of polytechnic or practical schools, where students may attend and qualify themselves specially for chosen pursuits in business life, of any or all kinds; and where they may maintain themselves, if they wish, by their labor, a portion of the time daily, at mechanical or farm work.

Prof. Benton's School, in the Shenandoah Valley, Va., is an excellent example of the sort of school, which we ought to have in different parts of all the States, and of which there are several, in successful operation.

Prof. J. Brainerd, Joseph L. Smith, and others are making efforts to establish such an institution, in the District of Columbia, as a National Model Practical School. Mr. Brainerd has proposed to donate 50 acres of valuable land, toward and as a site for such a school and model farm, where students can get a practical education, by their labor, if they wish.

D. S. C.

Agricultural Calendar.

FARM WORK FOR FEBRUARY.

This month the weather is very variable as a rule. Some years, we have a cold, wet February, and some years, the weather is so favorable that much out-door work can be done, and we are tempted to go ahead as if Spring had come. It is impossible to know what this year, the month will prove to be, therefore any suggestions we make are of course subject to the state of the weather and condition of the land, which leaves it to the sound discretion of the reader, to act in accordance with them, or postpone certain operations as suggested, to a favorable time.

The hints we gave last month, as to the care of stock of all kinds, getting wood, timber, and fencing; securing ice, &c., are applicable to this month and need not be recapitulated now. We would only say in addition, take care of the working oxen.—Have them fed well and carded and comfortably sheltered, and you will only need half the number to do the work. Feed them not corn in the ear, but crushed corn, or meal and bran, or fodder cut up and mixed with meal. Roots, such as turnips, or beets, &c., *occasionally*, would be of great service, if you have not a sufficient supply to furnish them with half a bushel sliced or chopt fine, once a day. Remember too that one feed of oil-cake and meal daily alternated with their regular meals, is highly nutricious, fat forming food for beeves and mutton sheep.

PLASTER.

We esteem this the best time of the year to apply plaster to young clover and grain crops. If salt be mixed with it, say three bushels of salt to one of plaster, would be still better.

PLOWING.

Plow all stiff places in the fields intended for culture the coming season. Plow deep, and if the land is disposed to retain water, near the surface, subsoil if you cannot afford to underdrain. We believe it is no longer doubted by intelligent farmers that deep, loose soils retain moisture, and that highly enriched soils deeply plowed, with frequent cultivation of the growing crops, resist droughts and ameliorate, if not overcome, their baleful influences. The philosophy of this agricultural problem has, we think, never before been so convincingly demonstrated, as lately by "Carman," a correspondent of that sterling agricultural Journal, *Moore's Rural New Yorker*. We regret we have not space in the Farm Calendar for the whole of Mr. Carman's able article, but we give enough to show his philosophic reasoning, and the experiments he made to sustain his theory:

"Compact earth is a better conductor of heat than loose earth, which imprisons about its particles a quantity of air that, being a non-conductor, impedes its rapid transmission. It is for this reason that sandy soils are warmer than clay soils.—While compact earth is a very good conductor of heat, it is a very imperfect absorbent of moisture—two facts which render it both more susceptible to sudden atmospheric changes than loose earth, and less capable of resisting droughts.

Capillary attraction bears a certain relation to gravity that cohesion bears to molecular repulsion. As cohesion unopposed by repulsion would solidify the earth, so would capillary attraction unopposed by gravity rob it of all its moisture. On the other hand, if gravity were not modified by capillary attraction all arable lands near the surface would become so parched after rains as to render vegetable growth impossible. Hence that condition of the soil which is most favorable to both gravity and capillary attraction is that most favorable to the collection and retention of moisture. * * *

Three five-inch flower pots were evenly filled, the first with ordinary garden soil, pressed through a very fine sieve and made as dense as possible by the pressure of the hand; the second with the same soil sprinkled in without *any* pressure; the third with clean, red sand. The three pots were then placed in a pan of water so that they were nearly half immersed. In thirty-nine minutes the surface of the first (compact soil) was wet. The second (loose soil) in seventeen minutes. The last (sand) was not wet at all; in three hours the moisture had reached but one inch above the water level in the pan.

We may hence conclude, first, that sand is not valuable directly as promoting capillary attraction, and only *indirectly* as, mixed with clays or heavy molds, it may be necessary to preserve that porosity indispensable to its free action. Second, that the looser and more friable a soil is maintained and the deeper it is worked, the greater is the quantity of water passing through it—downward by gravity, upward by capillary attraction. That, third, a thin covering of sand—say half an inch—should prove one of the best protections against droughts, because water passes through it readily to the ground beneath and is arrested in its return and held upon the surface of the soil itself, since sand is *not* a capillary conductor and *is* a non-conductor of heat."

These sound and rational views should be read and remembered, and put into practice this year by every man who desires not to see his labor lost and his hopes blasted, by those severe droughts which seem to have become the *rule* and not the exception with the seasons of the past years, and each year they have increased in intensity and duration. This is attributed by wise men who have looked deeply into the reason of the fact, to the wanton and lavish waste of woodland, causing our forests to disappear as by magic. This brings us to the recollection of what we wrote last February, on

PLANTING TREES.

In that article we urged upon all, the propriety

and necessity of guarding against the further waste or destruction of our woods, and to replace as far as possible the continually increasing deficiency, as due to our posterity and to ourselves, by sowing tree seeds and planting such valuable timber as the oaks, chestnut, walnut, hickory, locust, &c. Now is a good time to plant trees, if the ground be not frozen. In the same article we said: Our forests are disappearing, and ere long we shall suffer severely for the present ruinous system of slaying splendid timber to make tobacco beds, or to enlarge the area of tillable land, which common sense ought to tell us is too large now, that is, there are millions of acres of land lying waste that should be brought into cultivation by judicious outlays in manures and industrious labor.

OATS.

The oat crop should be sown at the earliest moment the ground is in a proper state to be plowed. Manure well, put the seed in with a small plow, three inches deep, sow clover seed, harrow it in with a light harrow, and you may expect a remunerative crop. No crop requires early seeding more than the oat. The practice of late sowing and slovenly preparation of perhaps poor land not manured, necessarily results in the failure of this crop, and it is denounced as a poor crop to grow, while if the farmer had done his work properly and at the right time, his crop would have satisfied him. But we are slow to blame ourselves for failures in crops, it is always set down to "the seasons, or *our bad luck*." Take time by the foretop farmers, and sow your oats at the first moment possible, and not put it off until you are busy, or ought to be, in preparing your corn land and other pressing spring work in April or May, when it may be too wet to sow or plow.

TOBACCO.

Hasten the stripping of your tobacco, in all fit seasons for such work. Should a good time, as is often the case this month, sow a large portion of your tobacco seed. Early sown beds produce plants with bunchy roots, that are tough and will "stand" better than tender plants from late sown beds. For the inexperienced we give our views as to making a bed. The soil should be rather light with a plenty of virgin mould on it. Select, if you can, a hill side with a gentle elevation, facing the South or Southeast, protected by woods on the North and West. Where the hickory or walnut has grown, and where there is plenty of dogwood under growth, is deemed the most favorable soil for plants. Clean off the bushes and rake off the leaves, or burn them, then grub the stumps and larger roots. Rake off the coarse mould, and the half decayed leaves, Dig up with sharp hilling hoes and chop back.—Rake well and get out the roots. Then chop crosswise and rake again. Sow at the rate of 200 lbs. of guano to the acre, chop this in lightly and rake until the bed is in fine tilth and level. Then sow 300 or 400 lbs. more of guano to the acre, thus allowing at the rate of 5 or 600 lbs. per acre. Rake it in lightly, sow the seed mixed in plaster or dry ashes, enough to go over the bed lightly twice.—Then tramp or roll with a heavy hand rolier.—Tramping is best we think. Sow plaster over the bed, enough to make it look whitish. Cover with pine or open brush, thick enough to conceal the ground, yet let in the sun's rays. We have known beds made on a good soil, for years in succession, by covering them up, after the beds were done with in well rotted manure and straw, to keep down all grass and weeds.

Some planters take the straw off in December and make a shelter for sheep, feeding them on the bed with blade fodder and grain, until the ground was wanted for sowing. In this way old beds are kept up and saves cutting down woods for new ones. This latter plan is a most excellent one. It is best to sow a plenty of seed in the bed, for the fly is very destructive, and have beds in different parts of the farm, for the fly will sometimes attack one bed and not another.

POULTRY-CHOLERA.

To cure poultry of cholera and to keep them healthy, some persons recommend feeding twice or three times a week, for two weeks, bran mashed with a liberal dose of red pepper, common garden pepper pods and seeds pounded up. Others say they have succeeded by mixing a tablespoonful of alum with one gallon of sour milk, set in shallow pans where the chickens can have access as often as they choose.

We give the above recipes, from exchanges, in the hope that they may prove of value in arresting the havoc that cholera is making with the poultry in parts of southern Maryland as we have been grieved to hear.

After the middle of the month, poultry will begin to lay eggs freely. Keep the houses clean, and warm, well lighted and supplied with water, a box of ashes that they may dust themselves; one with small gravel and pounded oyster shells; coarse bone dust may also be given. Keep up this plan through the season and you will succeed. Setting hens ought to be by themselves in darkened or secluded nests. It is a good way to put them in boxes like a candle box, with a hole cut in one side for an entrance, and let the nest rest on the ground.—Stick evergreen branches about the front of the box, it adds to the secrecy and seclusion which they delight to enjoy when in incubation.

STATE POULTRY SHOW.

The late Poultry Exhibition in Baltimore would have opened the eyes of our best farmers, to the great importance of poultry raising, had they been there to see the chickens, big as their best turkies, and ducks like geese and turkies, and geese as heavy as their own brag boys of six or eight years old.—Could they have seen what was there to be seen in the exhibition room of the Poultry Society of Maryland, held in Baltimore, January 5th, 6th, 7th and 8th, they would have gone home impressed with the idea that *poultry was profitable*, and should be more attended to in the country. And that a chicken at 8 months old should be 8 lbs. and 10 lbs. in weight, selling for 15 to 20 cents per lb.—and, therefore more profitable than raising beef, or mutton, or pork. Without doubt, eggs are more profitable than any other product of animals or animal nature.

GARDEN WORK.

GARDEN WORK FOR FEBRUARY.

Not much can be done, yet, if the weather will permit, enough to occupy the gardener very fully, unless he has already performed much that we suggest as fit work for this month.

Grapes.—Prune the grape vines and use the knife freely. Two main stems, four or five feet high, trimmed close, are enough for each vine. High trellises, of course require different pruning. Procure practical treatises on grape culture, and follow the directions, or obtain the services of an experienced man, as success in grape culture and grape production greatly depends on proper pruning of the vines.

Cold Frames.—Attend closely to these, and force lettuce, radish, spinach, &c.

Beets, Parsnips and Carrots.—For early use these may be sown, if the ground is in good order for working. Manure well, spade deep, rake well.

Onions.—The seed of onions may now be sown, and onions planted out for seed. Ashes, plaster, and soap-suds are excellent fertilizers for onions.

Spinach, Radish and Lettuce.—Manure very highly a warm border, prepare it nicely and sow thinly seeds of radish, lettuce and spinach.

All small salading, such as mustard, cress, &c., may in like manner be now sown.

Parsley, Thyme, Sage, and other culinary herbs, can be sown as soon as the ground is in order.

Peas.—After the middle of the month, peas, being hardy, may be sown. A few rows every ten days from now until May will give a succession. For earliest sowing we would commend the dwarf sorts, as they can be more easily protected from the severe cold, than the tall sorts.

Trees, Dwarfs and small Fruits.—These, if they were not attended to last autumn, should be now pruned, shortened, worked about, manured, and mulched with leaves or old straw. The bodies and larger limbs washed with a mixture of two parts soft soap, one part salt, and one part ashes, diluted with water to the consistence of thick whitewash and applied with a white-wash-brush.

General Work.—Make the frames for new hot beds and cold frames, and glaze the sash or nail on the covers to frames, made of muslin, saturated in linseed oil. They answer as well as glass, and better, late in the spring, and are cheaper. Prepare some hand glasses for plants early set out, and such as are liable to be molested by the insects. We know of nothing which is so inexpensive, that gives more satisfaction and are so useful, as these hand-glasses or frames covered with oiled muslin. They have been improved of late in construction and are sold low. Any intelligent man can make them quickly. They are now made to fold up, which is a great convenience.

The whole garden should be heavily manured and spaded deep. A plenty of dung, ashes, lime, salt, plaster, bone dust, and such like fertilizers, (some of which are wasting about many a household, such as the cleanings of the hen-house, pidgeon-house, soap-suds, soot, &c.,) with thorough cultivation, are essential to a productive garden, and the garden is an important portion of the farm, or is the means of furnishing at small cost, health-giving palatable food for the whole family, without such there is but little real domestic comfort.

Use of Toads.

The Journal des Connaissances Medicales states that the French horticulturists have followed the example of the English ones, and peopled their gardens with toads. These reptiles are determined enemies of all kinds of snails and slugs, which, it is well known, can in a single night destroy a vast quantity of lettuce, carrots, asparagus, etc. In Paris toads are sold at the rate of fifty cents a dozen. The dealers in this uninviting article keep it in large tubs, into which they plunge their bare hands and arms, without any fear of the poisonous bite to which they are supposed to expose themselves. Toads are also kept in vineyards, where they devour during the night millions of insects that escape the pursuit of nocturnal birds.

Variety in farming is safer than specialty.

SOME NOTES ON JANUARY NUMBER.

To the Editors of the Maryland Farmer:

Your January number comes full of matter out of which all sorts of readers may gather something of profit. Out of the many things which interest me I note several points in the report furnished by your correspondent, Land Mark, of proceedings of the Potomac Fruit Growers' Association.

The practice of sowing buckwheat among peach trees is commended by several speakers in very decided terms. Among others was Mr. Saunders, who on being asked the reason of it, said: "He could give no reason. Let science do that. If we have the facts let us go ahead. He knew it was a good plan and practised it." This is the answer of a practical and a sensible man. It is the part of such a one to observe and to note the facts which are presented to him, and to hold on to them, science or no science. They may be, and often are at variance with what is taught for science, but are not the less to be prized for that. It is only by such well established facts that science corrects her teachings and that a true science is finally built up.

I venture to suggest what may be the interpretation of the fact. The cultivation so necessary for the peach orchard induces a tendency to the growth of wood which may be prolonged so late into the season that the wood does not ripen well in due time. Buckwheat, which should not be sown before the middle of July, will, by the middle of August, have attained such growth as must put upon the growth of wood, a check that will be increasing till the crop matures. This check ripens up the wood and the fruit buds in due time. As soon as the buckwheat straw falls, it begins to act as a fertilizing mulch that brings the surface soil into the very best condition for immediate effect on the young fruit to which the early Spring and Summer nourishment of the tree is devoted.

The fact about nails driven into a tree, as stated by the chairman, if it be a well established fact, does not seem to admit of so plausible an explanation. I should expect the nails, for improving health and fruit, to be abont as efficacious as a horse shoe over the door, to keep out witches. If any reasonable number of nails driven into a tree may be ascertained to furnish in a given time an appreciable amount of oxide of iron in solution, and it can be shown that the solution may pass into the circulation, the nail treatment may be accepted; otherwise it should share the fate of the calomel remedy suggested some years ago.

In the discussion on pear growing, Mr. Saunders is reported as saying: "I have never seen any soil that has not sufficient mineral matter." I have said about the same thing many years ago. It was not probable *prima facie*, that this earth which went through so wonderful a course of preparation for man's use, and on which he must depend for his daily bread through all the centuries he is to inhabit it, could be worn out by the feeble efforts of a few generations. The mineral constituents exist in various proportions in different localities and some soils are better constituted than others in this respect; but it may be set down as a very sure thing that a soil known to have been at one time fertile, may be made so again out of its own resources; that it does not need any supply of minerals from outside. Any land that may have been heretofore productive in tobacco and for which Liebig is quoted as recommending an application of potash, by Mr. Curtiss of the Fairfax Club, will be found to have all the potash necessary, if the growth of broomsedge and pine trees could be carefully consumed and the ashes returned. The sedge and the pines have made available, potash that was there already but not available perhaps. And this is the philosophy of all improvement, by the growth of clover and peas and other plants, as well as by ploughing and rotation of crops. None of these add anything whatever to the resources of the soil proper. Not an iota of mineral substance is added to the original stock.

Whenever we make, therefore an artificial application of these we should be sure that they are in such a state of preparation as will make them immediately available: otherwise we are only carrying coals to Newcastle. We are placing phosphates and potash and lime where they already exist in abundance, and where they will need the same course of "weathering" that the natural soil only wants.

N. B. WORTHINGTON.

Farmers should take Farmer Papers.

How many farmers take and read the city Magazines, which take no interest in farmer's welfare, to the exclusion of those good Magazines devoted almost and wholly to the promotion of Argricultural advancement and prosperity.

Would it not be the wiser course for farmers more liberally to support their own Journals, in order that their publishers may have the abundant means to make them as large and good as the best; and to even give the preference to those nearest home, who know their special interest, and take special pains to advocate them?

We often see new Literary Magazines started up, with friendly words for theatres, circuses, the arts, races, sports, and so on; but not a line for Agriculture, and farmers are asked to pay for them.

D. S. C.

For the Maryland Farmer.

FARMING WITHOUT MANURE.

In reading reports in various British Periodicals, I find the following statements, which may be interesting to the readers of the MARYLAND FARMER who are troubled to get manure—at all times.

Mr. Prout, an English Farmer cultivated, for many years, a farm of 450 acres.

He states that for 13 years successively, he cultivated his fields, taking off a crop every year, of either wheat, oats, grass, or roots, without applying any kind of manure or fertilizer, obtaining full, and profitable crops, and without exhausting or deteriorating his lands. He did it by thorough and constant culture—thorough underdraining—deep plowing, and frequent cultivating and harrowing, so as to keep the soil fine, loose, and porous, in order that the air could freely and continually penetrate and circulate through it; and also, that moisture could be absorbed when needed, and excess of water pass off. He says his crops have netted him, above all costs, during all that time, year after year, a profit, ranging from $51, to $90, per acre; 12 to 15 inches depth of plowing did it.

Another English farmer, Mr. Middleditch, cultivated the same land, for many years, after being deeply underdrained and deeply plowed, with steam tackle, and frequent harrowing, all at a cost of about $37 per acre, without any manure, and no diminution of products, and "derived large and notable profits, every year." Deep plowing and frequent stirring the soil is what he claims did it.

Several other cases, of similar practice and results are named, showing cultivation better than manure.

These statements are worthy of careful consideration by those interested, coming from authenticated sources—English Papers. Liebig says, on this subject: "the frequent supply and renewal of air and oxygen into the soil, by frequent plowing and stirring it, favors decay and disintegrations, and thereby fertility, is secured."

"In a soil to which air has little or no access organic matters do not decay and dissolve, and fertility is prevented; for such decay can only take place from free and frequent supply of air and oxygen."

The same causes are necessary to produce dissolution of mineral matters in the soil.

Thus, it is easily seen how, that deep, thorough, and frequent stirring and plowing, to admit air and moisture, will continually promote fertility and productiveness in the soil.

Appropos, this subject, the *Mark Lane Express* says, "the average yield of wheat, per acre, of Alderman Mechi's farm is 56 bushels; and that the average yield in England is 28 bushels, the acre;" yet in our country, the average is less than half that yield. Let our farmers ponder and improve—rise toward the above profitable standard.

D. S. CURTISS.

For the Maryland Farmer.

HUNGARIAN GRASS.

In spite of the few discouraging reports which were at first promulgated this grass is gradually working its way into fame. After seven year's trial of it, I am still better satisfied as to its value for all kinds of farm stock, without any exception. Having been compelled to place it on top of our other hay, we are now feeding it out to thirty head of horses, cows, and fattening steers with fine results. I find it a profitable substitute for the oat crop, which for the past few years has been so poor.

The plan which we find to be the most economical is to haul the manure out on last season's corn stalk ground early in the Spring, and as soon as the corn is planted (or even before) turn it under by a good honest furrow. Harrow well, and as soon as all danger from frost is past, sow broadcast, at the rate of one bushel of seed per acre, and cover with a light harrow and roll well. In a reasonable season this treatment will ensure at least one and a half tons of hay per acre, and we have had more. It is usually ready to cut in 65 to 70 days from planting and should not be cut too low in order that there may be a stubble to keep the grass from coming in contact with the ground and delaying the drying—say two and one half inches high. It commences to ripen at the bottom and the first joint becomes hard before it is fit to cut—hence there is not so much lost in this stubble as would at first appear. As before mentioned, I have fed it to all kinds of stock and in all cases find them more liable to suffer in the want of it than from eating it. Some report it a dangerous feed for horses: after several winters experience I have never found any bad effects to follow its use three times per day.

We find it a great advantage in affording our stock an agreeable change of food, and on this account we usually keep some of it until Spring, to feed to the horses while at the spring plowing.

CHESTER COUNTY, PA.

DUMMET'S Orange Grove, South Florida, produced 600,000 oranges last season, and he expects to have 1,000,000 this year, Three or four years ago the trees were nearly destroyed by insects, but they have fully recovered and look finer than ever.

For the Maryland Farmer.

STRAWBERRY CULTURE.

BY D. Z. EVANS, JR.

The cultivation of the strawberry is generally profitable, more so than grain, and especially so when near to a good local market, the medium sized towns proving to return more money than the cities in a generality of cases, for parties from a distance can very readily ship, by rail or boat, to the cities, while the towns are either not blessed with good railroad facilities, or seem to be too small to bother with. Taking the average for a series of years, there has been more money and better returns from our local markets than from the shipments made to New York, Philadelphia and Baltimore.

The strawberry is not very difficult to produce, the great desiderata being to plant in suitable soil and cultivate well, and market properly.

The soil best suited to the strawberry, considering longevity and productiveness, is one known as a clayey loam, while a sandy soil or a sandy loam no doubt will bring earlier berries, but they are not so fine nor in such abundance, while they run out sooner. Good cultivation, liberal manuring and mulching, will so nearly make the ripenings together, that we prefer a clayey soil on account of its many advantages, over a very light or sandy one.

Experience in planting strawberries for market purposes tells us that it is unprofitable, and very undesirable to plant the plants in the Fall. Some claim that a good crop can be produced in the following year. This is a mistake, for I question if any strawberry grower ever produced a *crop* the first year by doing it, while I well know the extra expense in keeping them clean is quite an item in a patch of several acres. We prepare the soil in early Spring by plowing deeply, never using grass land or grassy pieces, with a two-horse plow. We then harrow well and mark out furrows with a good one-horse plow 3½ or 4 feet apart, in which we put a good sprinkling of fine, well decomposed stable manure, to give the plants a start. A ridge is made over the manure in the furrows, the plow going around twice to make the ridge in prime order for planting. The ridges should only be made as fast as you can plant them, so as to have moist earth for the roots; or, if the surface soil is very dry, throw up the ridges a couple of days before planting, so it can become moist on the inside.

After the first ridge is made, take the plants, having first steeped the roots in a thin mud, and drop hem along the rows about twelve or eighteen inches apart. One boy can drop plants as fast as two or three can plant. In planting care must be taken to get all the roots straight down, to prevent the sun from drying them, and also to press the soil firmly with the hand around the crowns of the plants. To show what good pressing the soil around them does, let a row, or a part of one, without it, and you will not question the use of doing it.

The cultivation commences in about a couple of weeks after the plants have been set out, when the weeds commence to show themselves, and should be continued throughout the season, the objects being to keep the weeds down, and to so loosen the soil as to admit moisture and air, both being essential to the growth of the plants. A cultivator and a good hand hoe are the implements used. Some little hand weeding is generally necessary immediately around the plants, for very few can hoe close enough to the plants to clean out all the weeds with safety.

The varieties which we grow are not very numerous, especially those we grow for market purposes, the Wilson's Albany seedling standing at the head for its general good market qualities.—We also grow the Kentucky, an admirable late sort, the Chas. Downing, a good variety, ripening about the same time as the Wilson, and some others.—For a home table variety, I would recommend the New Jersey scarlet, which, when well ripened, is the sweetest berry grown. It is not so desirable a sort for market, but for home use we consider it without an equal. We have grown the French's seedling, Downer, Triumph De Gand, Cutter, and several more, but have now confined ourselves to the first mentioned sorts.

Town Point, Cecil county, Md.

Value of Evergreen Trees among Fruit Trees.

A well grown evergreen tree gives off continually an exodium of warmth and moisture that reaches a distance of its area in hight; and when the tree planters advocate shelter belts, surrounding a tract of orchard of fifty or more acres, when the influence of such belt can only reach a distance of the hight of the trees in said belt, they do that which will prove of little value. To ameliorate climate, to assist in prevention of injury against extreme climatic cold in winter and of the frosting of the germ bud of the fruit in spring, all orchards should have planted, in and among them indiscriminately, evergreen trees at distances each of not more than 150 feet apart. Such a course pursued, we have no doubt, will render greater health to the trees, and be productive of more regular and uniform crops of fruit. At all events, it is worth trial, and we shall be glad if our readers can inform us of any practical experiments on the subject.—*Scien. Am.*

Notes on the Agricultural Department.

STATISTICAL—EXPERIMENTAL GARDEN—SEEDS DIVISION—AND THE MICROSCOPIST, WITH OTHER ITEMS OF INTEREST.

There are few matters of more interest and importance to farmers, than reliable statistics, in regard to the quantity and condition of crops and stock, and the different markets and prices of the same, in different sections of the country.

There is no branch of business in regard to which it is so difficult to obtain complete and reliable statistics—of the acreage that is planted, of the amount raised, of the average yield, of the value of the lands, the quantity and value of stock, the cost of raising and producing, the cost of fences, buildings and other improvements, and so on. There are various reasons for this deficiency, but we will not stop to name them, at this time. The Department, under the efforts of Mr. Dodge, its old and industrious statistician, is doing much in this direction.

The Experimental and Propagating Garden, with the splendid arboretum, in charge of Mr. Saunders, the Superintendent, are useful and interesting objects to visit. Much has always been said, and many curious thoughts and speculations are entertained in regard to the grain, flower and garden seeds, annually sent out by the Department, which, in a vast number of instances, have been of large advantage to different sections of the country, by which they are enabled to get possession of new and valuable varieties of plants. This Division is under the charge of Mr. Glass.

Prof. Thos. Taylor, the Microscopist of the Department, is one of the most laborious and useful employees in it. By careful inspection with the microscope he discovers the nature and cause of diseases in plants, and aids in discovering the remedies. His labors, on the cranberry, in New Jersey, were highly beneficial to that fine fruit crop.

Frederick Watts, Jr., son of the Commissioner, and chief clerk, is one of the most courteous and obliging, and yet efficient gentleman that has ever occupied that responsible position; he treats all callers at Department, whether on business or for curiostiy, with that attention that is pleasant to them, and shows he regards the position as an agency of the people, for the people, not personal.

The Divisions of Botany, and of Chemistry, render more or less service to the farmer community, as they have opportunity, in examining plants or soils—or analyzing them.

The Museum of fruits, fabrics, grains, birds, insects, and a thousand curious things, is a favorite place of resort to many visitors daily. And so the Library. The other day I had the pleasure of meeting Mr. Ed. Wilkins, the great Peach grower of Maryland, at the Department, where he was in consultation with the Entomologist, in regard to the insect enemies of the peach orchard from which he has suffered.

The Conservatories and the Green Houses, are pleasant and instructive places to visit and spend an hour or two among the exotics. D. S. C.

For the Maryland Farmer.

Bursting of Fruit by Moisture.

One of my correspondents asks, "why it is that long continued wet weather will often cause the skins of cherries and other soft fruits to burst when theory says they are enclosed in watertight coverings?"

Before giving the operation any scientific name I will illustrate the operation by an experiment which my correspondent may try for himself. A common bladder is "supposed to be watertight."—Let one be filled with sweetened water and immersed in pure water—in a short time this pure water will be found to be more or less sweet (according to the time which has elapsed) and chemical tests will prove that the water in the bladder has lost a portion of its sugar. Notwithstanding it has lost a portion of its sweetened water yet it will be found to contain more than was first placed in it, showing that in portion of the outside water has passed in. In conducting the experiment all that is necessary is that the two liquids shall be of different specific gravities; salt water and pure water will do as well as sweetened water. The lighter liquid passes into the bladder with less resistance than the heavier water placed inside, and hence more is taken in than is permitted to escape, and in time the bladder will burst. If for the sweetened water, our correspondent will substitute the juice of the fruit—for the bladder, the skin of the fruit—and for the pure water, the rain falling on the fruit, and he will find the counterpart of the experiment. T. J. E.

When shifting pulleys from smaller to larger or *vice versa*, take three times half the difference between the diameter of the pulleys and the result will be the length of belt to take out or to put in.—*Scientific American.*

No stable is fit for use, or economical, unless provision is made for draining the urine from it as soon as it falls.

ESSAY

On the Practicable Management of a Farm applicable to Piedmont, Va., containing 150 Acres.

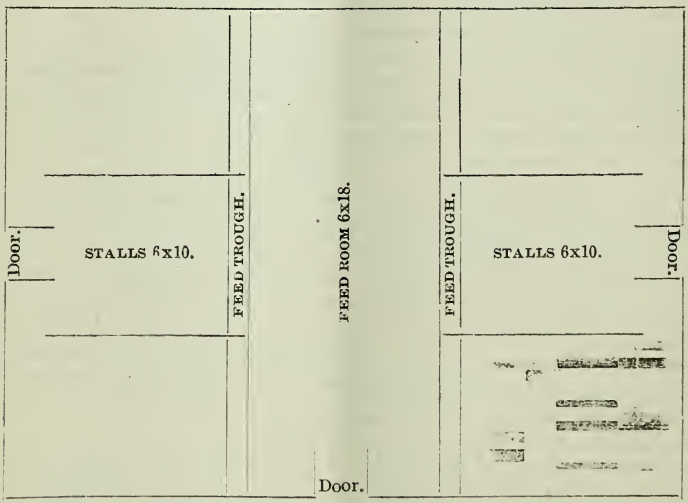
BY J. J. LAMKIN, OF PITTSYLVANIA.

Of all human acquirements, nothing is more honorable and worthy of a freeman, than agriculture—it embraces all that can render nations great and prosperous—all that can give prosperity to commerce, existence to manufactures, and civilization to the world. Being thus invested with such essential properties, it becomes us to give it such a practicable demonstration as will be of most profit to each respective farmer.

I shall now proceed to give a brief description of those buildings so necessary to farming. Of course, it is taken for granted, that your place of residence is neat and attractive, surrounded with shade trees, shrubbery, and flowers, with gracefully laid off lawns and walks, all of which is an indication of management, refinement, and culture.

As we have to look to that noble animal, the horse, as chief importance in the cultivation of the soil, our attention should be turned to the best constructed, and most comfortable place of rest and protection.

For the size farm we are supposed to be managing, a stable with six stalls, 18x26, with a room through the centre 6 feet wide, which we call the feed room—this would leave on each side 3 stalls, 6x10 feet—this makes a very comfortable and convenient stable.



The ground work of the above described stable, is drawn upon a scale of ⅛ of an inch to the foot.—This stable may be built of hewn logs, framed or with brick, run up half story above the joist, so that it may hold a sufficency of rough feed, care being taken to have the flooring tight to hold the grass and other seed from falling through.

For further benefits, the stable should be well shaded for out cattle, with a continual supply of leaves, and straw, sprinkled occasionally with lime and plaster, which will make a quantity of good and durable manure.

Having cared for the horses and cattle, the next thing we should direct our attention to is a suitable granary, which is one of the indispensables to the farmer. This should be a framed building, covered with shingles, of sufficient size to hold all the cereals made upon the farm—it would be well to have it so constructed, that a threshing machine could be introduced, so that the grain could be gotten out in damp rainy weather. This could be done if the farmer had the capital, which would be well invested—otherwise, a building thirty feet by thirty, well shaded, with a lightning rod, for protection, or still better, insured in some good fire insurance company, would meet all the wants of the agriculturist.

There should also be a corn house, made rat proof, large enough to hold one hundred and fifty barrels of corn, with a room cut off in front for the purpose of shelling corn for mill or market. To make a corn crib rat proof, hew and trim in the shape of a sugar loaf the blocks upon which the house shall set—they should be of locust, or any durable wood, set firmly in the ground of sufficient length from its surface, say two and half feet—if too low the rat could spring from the ground to the body of the crib. Sheet the blocks upon which the sills shall set with tin, and have your steps so made as when not in use to draw them up from the ground—the reason for this is obvisous.

Weather board with oak slats three inches wide, putting them on the in, as well as the ontside of the studing, one inch apart, which will give sufficient air to the corn.

There should be a wagon house large enough for all the farming implements, which is an important point, to secure them from the weather when not in use.

It is taken for granted suitable houses for farm hands, well located and comfortable, are erected—as well as smoke house, poultry houses, &c., for the accommodation of the busy housewife. We are now conducting a farm of 150 acres, and it is ne-

cessary to divide it into suitable number of fields —twenty acres should be in woods, twenty in pasture, well sodded with herds grass—the 40 acres enclosed with good fence, for stock—10 acres for yard, garden, orchard and buildings, described in this essay; thus leaving 100 acres for cultivation, which we will divide into five shifts, forty acres in wheat, twenty in corn, twenty in oats, and twenty in clover.

Two number one mules would be sufficient team, with a good brood mare to do extra work, when needed, as well as to keep the farm in mules or horses, which if not needed could be sold at profit. Three good farm hands would be required to work the farm to its fullest capacity. The whole 100 acres, for general cultivation, should be under a good and lawful fence, as there is no fence law in this section, while each shift should be separated by a road of sufficient width for the passage of a wagon and team—this road bed might be sown in herds grass, for grazing or mowing.

By all means the rotation system must be pursued, and in order to develop the best improvement of the soil, as well as to get the greatest yield, an eye must be had as to what kind of crop should succeed one the other.

For obvious reasons, no two chaff bearing crops should follow in succession, as they put a double tax on the same chemical properties of the soil, but the farmer should fix on such a rotation as will give the necessary proportion of ameliorating with exhausting crops, that the farmer may restore to the earth as much as the latter extracted from it. By attending to this rule the soil will always be kept in good condition, and even continue to improve, if judicious tillage should accompany the rotation.

Wheat should follow a clover or pea fallow—corn should follow wheat or oats—clover should be sown with wheat,—oats should follow corn, and peas, oats, and so on. Of the artificial grasses cultivated, I must insist that red clover has the pre-eminence, its food properties I believe equals any other, while it cannot be surpassed in fertilizing quality. It seems to absorb more ammonia from the atmosphere than any other grass, which when ploughed under the soil, and put in cultivation, shows upon the growing crop equal to a heavy application of guano.

Orchard grass does well to mix with clover, as they ripen at the same time. Sow orchard grass in the Fall when wheat is seeded—one bushel to the acre—clover seed in the early Spring—one gallon per acre—run a harrow over them to keep them from running together in case of a hasty shower, which process will benefit also the growing crop of wheat.

Sow timothy on low grounds, and land inclined to be moist—herds and blue grass will grow on poorer upland, and besides making good hay, is excellent for preventing washes, and filling up gullies. Land should never be sown with grass seed, until it is put in fine order; unless this rule be attended to, grass will become foul before it is well set and rooted. Land should not be kept too long in grass—no ground should continue in grass until it becomes consolidated, for good crops of grass can no longer be reaped, unless the soil continues free and open.

Clover, rye, oats, peas, and even carrot weeds, are all excellent improvers of land, when turned under, and gives a large percent. of fertility to the soil—they have the nature of absorbing a certain percentum of ammonia from the atmosphere, which acts as a great stimulant to the soil.

In the Summer of 1872, I fallowed oats that had been sown on thin land, re-fallowed in November, in early Spring, ploughed land three times, passed a harrow over it—laid off and planted in corn—this piece of land, thus treated, brought a splendid yield of corn, which would not have grown two and a half barrels per acre.

I make mention of this experiment, to show by way of illustration, what these improvers of the soil will do.

If we look alone to the increased fertility of these green crops, I doubt whether any other stock than sheep would pay to graze them—the English farmer having demonstrated their great utility, as helps in improving their lands.

It has been bad policy in this section in keeping on farm too much stock, as they serve to graze too heavily the pastures, which tends to impoverish the soil,—so much stock as is necessary only should be kept. One yoke of oxen—three milch cows, so managed as to calf at intermediate times. I would recommend the Devon crossed with native stock, as combining the greatest utility, for milk, working and beef, taking less to keep them in good order and fatten them. As a matter of economy, so much of meat should be raised as will meet the wants of the family and laborers upon the farm. Two sows, one boar, the cross should be Essex or Berkshire upon our native stock—pigs should come at harvest time, and first of March. About forty sheep of best breed, properly managed, would be very remunerative to the farmer in the wool and meat market, as well as furnishing a luxury for the table.

For cultivation of wheat crop, deep ploughing, surface manuring, and shallow seeding, with drill, five pecks to the acre, with good variety of seed, sown in Peidmont, Va., first of October, with favorable season, will insure a good yield. Winter oats should be sown in September, and Spring oats middle of March; if land is good 1½ bushels to the acre. The land also for this crop, often too much neglected, should be well prepared, if you would expect a good yield.

Land for corn must be well prepared, broken up deep in the fall of the year,—this depth should be regulated by the nature of sub-soil—if under-soil is poor, do not mix too much with the surface—it would be better to turn only surface soil, followed by a subsoil plough.

In early Spring re-fallow, and drag with two horse harrow—lay off four feet wide on a level, drop the corn, two feet apart in the row, three grains in the hill, which should be planted soon as the frost is out of the ground—the blooming of the dog-tree is a good indication. When the corn is some three inches high, use five tooth harrow—by the side of corn—this answers well for the first working—for second use shovel plow, seeding and cleaning out the middle of the row. For low grounds, I would first side with dagon, with bar next to the corn, leaving a sufficient space between for colter furrow; follow this with single shovel, and lay by with dagon.

The crops being matured, should be gathered neatly, and managed well in storing them away—the surplus of which, when market is highest, should

be shipped and sold. All of the offall should be given back to the land, to repay for its generous productions.

We come now, in conclusion, to speak of the best economy to be practised. Liberality is the best economy in agriculture—this must be evinced in procuring for the hands the best and most improved implements, for good tools are as essential to the farmer as the carpenter.

Foresight is another item in the economy of agriculture—preparing work for all weather, and doing all work in proper time and season.

Another item in the economy of farming is not to kill time by doing the same thing over twice—when a thing is done let it be well done.

Great profit depends upon great improvement of the soil, which can never be made by penurious efforts. The difference between useful, and useless expenses, make the agricultural secret, for acquiring happiness and wealth. A good farmer will sow with a bountiful hand, and the earth will yield to him, her increase, in due season.

POTOMAC FRUIT GROWERS.

WASHINGTON, Jan. 5, 1875.

To-day this Society held its regular annual meeting, which was well attended, and the discussions animated and instructive.

Chalkey Gillingham, President, in the Chair, and Geo. F. Needham, in absence of the Secretary, was chosen Secretary *pro tem.*

After reading of the minutes, and disposing of the reports of the out-going officers, the Society proceeded to the election of officers for the ensuing year, which resulted in the election of the following:

President—C. Gillingham. *Vice Presidents*—W. H. Chase and Z. M. P. King. *Secretary*—J. E. Snodgrass. *Treasurer*—N. W. Pierson. *Executive Committee*—Edward Daniels, R. F. Roberts, J. H. King, E. P. Howland and P. H. Folsom.

After remarks by the new officers, Mr. Folsom read a letter from Mr. Hill, inquiring about the effects of freezing to manure heaps, referred to committee.

Col. D. S. Curtiss proposed the name of Col. Hiram Pitts for membership, who was duly elected.

Maj. J. H. King suggested the Quince as a topic for consideration at next meeting, and was requested to read a paper upon that topic.

Col. Ed. Daniels asked that the list of apples suitable for this region be considered; and after some discussion by many members, the majority opinion seemed to be in favor of the Wine sap, the Tewksberry winter blush, the Roman stem, the Limber twig, with some others, in that order, as best for this region.

Dr. E. P. Howland desired that the subject of keeping apples should be considered; and on motion he was requested to furnish a paper on that subject, at a future meeting.

Col. Daniels thought the Potomac region admirably adapted to fruit growing, if the soil and trees are properly treated, and proper kinds selected.

The President spoke in favor of the Smoke House apple.

Maj. King and Mr. Needham spoke in favor of Smith's cider apple. Z. M. P. King recommended highly the Shockly. Mr. Chase inquired about the St. Lawrence.

Mr. Saunders inquired about the "yellows" in Peaches, about the best Grapes and Raspberries. He thought the Concord is the best for this immediate section.

Members remarked that they had never seen peaches affected with the "yellows" in this region.

Mr. Saunders thought the worn-out or exhausted lands of Maryland and Virginia, would grow good fruit trees and fruit, if deeply plowed and well drained, so as to let the air permeate the soil and dissolve minerals.

Col. Daniels believed the Potomac bluffs well adapted to grape growing.

Col. Hiram Pitts was raised in Western New York, a country very favorable for apples; not so good for peaches; he inquired about the Albemarle pipin, and was told it is the same as the Newtown pipin, in New York. Mr. Pitts said there were apple trees in his native place that were planted by his ancestors some 80 years ago, which are now thrifty, and produce good crops of apples, such as greenings, pipins and others.

Mr. D. O. Munson said orchards want good rich land as well as other crops.

Dr. E. P. Howland had a field so poor it would not produce more than five bushels of corn, he manured it with muck and other stuff, planted out young apple trees, and now has a fine, thrifty apple orchard; and when the trees are well grown he shall seed down to clover.

Col. Daniels and Mr. Saunders said lands were impoverished by shallow, surface plowing and scraping—and that deep subsoiling with heavy plow, and seeding to clover would bring up and renovate the warmest lands, and make productive again.

This deep subsoil plowing and frequent stirring the soil would let in the air, and let surplus moisture flow off, so the land would become fertile.

Dr. Snodgrass spoke in favor of deep plowing and freely seeding to clover; get a good stand of clover to grow, and you can go ahead and bless God, in high hopes.

Dr. Howland wanted a rich soil to make good thrifty trees for fruit to grow upon, then he would seed down to clover and let the trees make fruit.

Maj. Hines thought the same elements were required in the soil to secure good trees and fruits, that are needed to make good grain crops.

Dr. Howland proposed Mrs. Albertina Keughling as a member, and she was unanimously elected.

After some running debate about Pears and Quinces, the Society adjourned to the first Tuesday in February.

D. S. CURTISS.

THE EUCALYPTUS GLOBULUS.—We have frequently called attention to the many peculiarities of the eucalyptus or Australian fevor tree, and we urged its cultivation in miasmatic localities. We now hear that the city trustees of Sacramento, Cal., have ordered an expenditure of three hundred dollars in the purchase and setting out of these trees on Tenth and R streets in that city. The order was made as an experiment to test the power of the trees as a preventive against chills and fever. If successful, they are to be introduced into Sacramento on a larger scale.—*Scientific American.*

FOREIGN CORRESPONDENCE.

PARIS, FRANCE, Dec. 15, 1874.

STEAM ROAD WAGONS.

Our papers have illustrations and advertisements of the steam road wagons of Aveling and Porter: was this the pattern that operated so favorably near Philadelphia, of which a description was sent to your paper by Mr. J. Wilkinson a short time ago? The time appears to be approaching when horses will not be used as extensively as now, as plowing, harrowing, cultivating, drilling, thrashing, sawing wood, cutting feed and hauling to market over ordinary roads may be done by steam: the age of steam for farm work is at hand.

CATTLE SHOW.

An agricultural exhibition has been held at Chateauroux, at which 235 cattle were exhibited, 169 lots of sheep, 40 horses, besides pigs, poultry.

An exhibition of machines has also been held by the cultivators of Melun Provins and Fontainebleau at which M. Drouyn de Lhuys delivered a very entertaining and instructive address. The dread of the spread of the terrible phylloxera is so great here that the Prefect of the Rhone has issued an order to have the roots of the vines attacked, pulled up and burnt.

IRRIGATION.

An effort is making to construct a grand canal of irrigation by the waters of the Rhone: a commission having decided to ask the Ministers of Public Works and Commerce to assist the project.

EXHIBITION.

The secretary of Chartry and Chateaundu have decided to hold a joint trial of harvesting machines.

GOVERNMENT DECREE.

In a decree issued by the Minister of Agriculture and Commerce, prizes are offered for those who will make the best use of the water of the canals in the department of the Bouches du Rhone as follows: 1st prize, gold medal and $200; 2nd prize, silver medal and $140; 3d prize, silver medal and $120.

The above is for irrigating more than 10 acres: gold, silver and bronze medals, and sums from $1-20 to $60, are offered for lands under 10 acres.

EXTRAORDINARY PREMIUMS.

I wish to call your attention to the following list of prizes, which were offered by the Central Agricultural Society of Marne, held this year at Rheims, Sunday, September 6th: it will give you an idea of the polish the French are putting on their agricultural operations:

1. A silver cup of honor to the farmer of more than 90 acres, who shall have made the most useful improvements.

2. A gold medal to the farmer working less than 90 acres, under same conditions.

3. Two plated medals and two savings-boxes of $20 each to the male and female farm servant, who shall be found most meritorious among those who shall be mentioned for extraordinary attention.

4. A gold medal to the farmer who shall have effected the most important drainage labor.

5. A gold medal to the farmer who shall have practiced the best system of irrigation.

6. Medals and premiums shall be accorded to those who by important improvements and real service, shall have merited departmental recompense.

7. Six premiums of $20 are offered to the one who shall have harvested with the greatest success and with the best machines, the greatest number of acres.

8. Two premiums $20 each, to the farmers who shall have sowed with most success, by machine, the greatest number of acres of cereals.

The last two offers perhaps, in your country, would be considered as encouraging, an extended area of cultivation without regard to product, but the condition affixed to the award of the prize—with the most success—would necessarily compel the judges to look at all sides of the question.

It is true that what we want is not an increased area but an increased aggregate production. And where there is proper, thorough cultivation, good seed, seasonable planting, and suitable capital, location and ground, it is a question whether in this age of steam culture and improved implements, we cannot enlarge our area and also increase our aggregate yield.

To Indoor Gardeners.

A correspondent of the *Farmer* says: Plants kept in a sitting room where frequent sweeping has to be done should be covered until the dust has settled, as dust upon the foliage injures the plant by retarding its growth and bloom, as leaves are to plant life what lungs are to animal life.

Where scale or red spider have accumulated, as they will in a warm, dry atmosphere, or in dark situations, whale oil soap suds showered over the leaves and sponged off on the under side, or turning the bottom up and dipping the whole down into decoction, will remove the pests. Where plants are crowded into too small space, they will generate the aphis or green fly, and the thrip and mealy bug Smoking or washing the plants thoroughly will destroy these also.

Above all, give your plants plenty of fresh air and all the sunshine possible. But few plants will grow in the shade, and this class is mostly confined to the begonia family and a few varieties of vines; among them are the smilax and common ivy.

THE DAIRY.

LONG TABLE TALK ON DAIRY MATTERS.

TALK NO. XII.

DEEP AND SHALLOW SETTING.

In November number *American Agriculturist*, Col. Waring gives an account of a trial of deep and shallow setting, in Buck's county, Pennsylvania.

EXPERIMENT No. 1.—In August, 1874, 8 gallons of milk were mixed: 4 gallons, 34 pounds were put in one deep can, filling it 16 inches: same quantity was put in 4 pans, 3 inches deep: 14 milkings were so treated making 476 pounds, (224 quarts) of milk, 16 inches deep in 14 cans, and same quantity in 56 pans 3 inches deep: temperature 58 to 60° was about the same in both cases: the cans standing in a pool and the pans on a stone floor: the milk stood 48 hours when it was skimmed, giving 46 lbs. of cream from the cans, and which made 15 lbs. 10 oz. of butter: and 57 lbs for the pans which made 21 lbs. 6 oz. of butter: or it took 30½ lbs. milk in deep cans to make one of butter, and 22¾ in shallow pans, a gain in favor of shallow setting of about 33 per cent.

Col. Waring, who is an advocate of deep setting, says in regard to above that "he cannot account for the result, and has no equally careful experiments to set off against it: that repeated experiments on Ogden farm showed the superiority of deep setting in more butter of better quality, in uniformity and the saving of labor."

[As we discussed both plans at length in April No. 1874, *Maryland Farmer* impartially, we shall not go over the ground at present.—*Dairy Ed.*]

We have at hand two reports of trials with the two plans, and both are from Pennsylvania; the State in which the above experiment was tried: we submitted a large amount of testimony in April number in favor of deep setting, and our object now is to give these two detailed statements and a few comments thereon.

EXPERIMENT No. 2.—J. I. Carter reports to the "*Journal of the Farm*" that he mixed the milk and put 29 lbs. in a can 13 inches deep, and the same amount in 3 pans 4½ inches deep: temperature 60°, water on a level with the top of the milk in both cases: animal heat was reduced in both vessels in about the same time: the milk stood 36 hours: 3 settings were thus treated and the result was

	lbs.	oz.
Weight of cream for cans,	17	3
" butter " "	5	10
" cream pans,	12	7
" butter "	5	9

The extra cream and the small additional amount of butter amount to nothing, so far as *more* butter is concerned: if as much butter can be made by cans, these are to be preferred for milk-settings.

In commenting on Mr. Carter's statement, the editor of the Journal says he has tried 3 careful experiments resulting similarly to Mr. Carter's, and in each case the cream was one-fourth heavier from the deep cans than from a like amount of milk in shallow pans.

EXPERIMENT No. 3.—Thos. Edge, Chester Co., Pennsylvania, reports to the *Practical Farmer* that after thorough mixture of the milk he measured off equal quantities and divided it between cans (20 inches deep by 12) and pans, and placed them in water on a level with the surface of the milk: the trial lasted six days and resulted as follows: October 26 to November 1st.

1st day	2 cans gave	14 lbs.	cream.
"	12 pans "	10¾	"
2 "	1 can "	8¼	"
"	6 pans "	6	"
3 "	1 can "	8	"
"	6 pans "	5¼	"
4 "	2 cans "	14⅜	"
"	12 pans "	10¼	"
5 "	1 can "	8½	"
"	6 pans "	5⅜	"
6 "	2 cans "	15	"
"	12 pans "	10⅞	"

A gain of 18⅝ (about 33 per cent.) lbs. cream in favor of the cans and on churning, 15 oz. more butter.

In this matter of selling milk the question is not, which plan will give us cream the more quickly, nor is it better to set milk 12 to 20 inches deep than 3 or 4. Nor, which plan will give us the more cream, but, by which *system* can we secure the best results in butter for our outlay: now, what is the deep can system?

1. After long and careful experiments, * it has been decided that the more speedily milk is cooled down the more completely is the cream separated from it: this principle directs the treatment of the milk in the Swedish butter factories,* hence they use cans 20 inches deep, and oval, giving a small diameter of seven inches: it will at once be seen that this shape places the milk directly under the influence of the water, being at no spot in the can over 3½ inches from the water: the cans are immediately set in ice-cooled water of 35° to 40°: this is practiced by the farmers who furnish cream to the factories also: in Experiment No. 1. which gave such unfavorable results for deep setting, we find that the water in the pool was at 58°, and when a deep can was put into it the temperature went up to 60°, *but at the expiration of* 10 *or* 12 *hours* it would be lowered to 58° again: we think right here is the weak point of the experiment: the product of cream from the deep cans was eleven pounds less than

that raised on the shallow pans from the same quantity of milk, whereas, all other experiments show that proper deep setting gives more cream if not more butter: Mr. Carter's two tests, the editor of the "Journals" three trials, Mr. Edge's six experiments prove this fact: Col. Waring also says, "the amount of cream, whatever the product of butter, is always larger in a relative test, from deep cans than from pans," and while the amount of butter may not be greater from deep than shallow setting in all cases, if the cream is not greater it indicates some defect in the application of the system.

The exposure of a large surface of cream in the shallow pans would facilitate evaporation to a great extent, and hence "dry out" the cream and make it less in quantity than on deep cans from the small amount of surface exposed on the latter; this loss would not necessarily diminish the *amount* of the product, even if its quality in consequence of leathery toughness of the cream was affected.

2. Again, was the water in trial No. 1 on a level with the surface of the milk in the cans? Deep setting is not sufficient to make a fair test, but the application of the *system* to the milk tested, and this system includes cold water, rapid cooling of the milk and water as deep as the milk in the vessel: in Mr. Carter's trial, Experiment No. 2, the milk was cooled in two hours: the object in thus placing all the milk in the vessel under the influence of the cold water is to keep it sweet long enough to permit the perfect rising of the cream, which being lighter than the surrounding fluid will rise to the top, if the milk is not soured and thickened by warmth or by standing too long, or chilled by cold: when this change takes place in the consistence of the fluid the passage upward of the cream is arrested: in this case only a portion of the cream would be secured: for this reason, where cold water and the other essentials of the deep can system cannot be secured, shallow setting is the better plan, letting the milk stand only 3 inches deep.

As Experiment No. 1 took place in very warm weather, and as the product of cream was so much smaller from cans than from the pans, it looks as if here was another defect in the application of the system.

3. One more point requires examination: If the milk in the deep cans of Experiment No. 1 was no higher than the surface of the water the question arises, had all the cream arisen during the 48 hours allowed? There is no doubt that all the cream will rise from a given quantity of milk *sooner* in shallow vessels of 3 inches than in deep vessels of 16 or 20 inches: cream will rise more quickly through 3 inches of fluid than 20 inches, but there are so many more points unsolved that the matter of time is of subordinate importance: we will illustrate by some experiments of our own: we skimmed two test tubes containing a sample of the milk of two cows after it had stood 24 hours (April 28,) with a result of 13 and 15 per cent.: skimmed again in 12 hours, (making 36 hours from time of setting,) with an increase of 3 and 5 per cent: skimmed again in 12 hours, (48 hours) with an increase of 1 per cent. in each: skimmed again in 72 hours from setting, with an increase of 1 per cent. when the milk began to get sour: hence, if all the cream was not obtained from the milk in the cans, in the Bucks county trial it would not be a full test of the two systems, and until further light upon the points to which we have alluded we cannot decide upon the bearing of the results there obtained, but we are safe in giving this advice to all: institute careful experiments under the conditions around you, and be governed in your treatment of the milk by the result, for that will decide the case so far as the course for *you* to pursue is concerned: we are setting our own milk in jars (2 gallon stone) 13 inches deep and 8 across, being as near the deep can system as present facilities will permit us to get. *

* M. Juhlin Dannfelt, Supt. Royal Agricultural College, Stockholm, Hon. member Royal Agricultural Society, England. From the Journal of the Royal Agricultural Society of England, as reported in Journal of N. Y. State Agricultural Society.

Extraordinary Percentage of Cream.

CLARKSVILLE, MD. Jan. 1875.

Dairy Editor Maryland Farmer.

I give below a list of percentages of cream from my dairy, which, considering the season of the year, I consider good: in your article in December number *Maryland Farmer* on "Milk," you state that Hassall gives the average of cream as 9½ per cent. Dr. Normandy as 8½: Wanklyn 9, 8 and 13, in two specimens: Dr. Wagner as 10 to 11: you remark also that "this is not high enough for high fed cows of the butter breed," which the percentage below corroborates:

DATE.	COW.	PERCENTAGE.	BREED.
Dec.	Blackey,	17	Native.
"	Blossom, P. M.	20	Grade Jersey.
"	" A. M.	17	
" 31	Pink, A. M.	18	Best Native.
" "	" P. M.	25	
Jan. 9	Daisy, P. M.	18.50	Jersey.
10	" A. M.	17 (within 5 hours.)	
11	Spotty, A. M.	24.50 " 6 "	Native
11	" P. M.	29.50 " 6 "	

I thought the above was a good average, but on a recent visit to the dairy of Hon. Thomas Lansdale of Triadelphia Factory and Mill, Montgomery county, he furnished me with a list of *his* per-

centages of the milk of two of his cows, as ascertained by graduated test tubes: the cows are Jerseys:

DATE.	COW.	PERCENTAGE.	
Dec. 27	Queen Katherine,	A. M.	21
" "	" "	P. M.	27
" 28	" "	A. M.	22
" "	Abby,	A. M.	19
" "	Queen Katherine,	P. M.	29
Jan. 1	" "	A. M.	17
" "	" "	P. M.	30
2 "	" "	P. M.	29

I saw the cream standing in the tube in this last test, after 24 hours of evaporation and coagulation, at 28.

Can these extraordinary percentages be attributable to any peculiarity of the climate in consequence of proximity to a grist mill?

Very truly, yours,

D. LAWRENCE.

The gentle hint our friend gives in his closing remark is noticed in previous numbers of these papers, we have insisted upon both good breed and good feed for the best results:

In the case of "Spotty" 29½ and "Pink" (25) both natives, we have a strong argument in favor of giving to our best natives good feed, good stabling, and good care, and the high percentage of cream indicates that these cows have had all these: how many of the out-door straw-fed, storm-beaten, native cows of America would give 25 per cent. of cream in their milk?

In regard to the 30 per cent. (one-half per cent. more than Mr. Lawrence's "Spotty,") given by "Queen Katherine" in the herd of Mr. Lansdale—a gentleman of large experience and good judgment, an excellent breeder and manager, who never raises poor stock and never buys it—we must confess it is the largest percentage of cream which has ever come to our knowledge, and the largest but one on record, we believe. The *American Agriculturist* mentioned once that one-third, 33⅓ of cream had been taken by Mr. W. Crozier, of Beacon Stock Farm, from some of his milk.

The great relative richness of the milk whose percentage of cream is given above, may be better estimated by comparison with the results of experiments in England, to test the relative quality of the milk of different breeds: a pure Brittany, pure Jersey, pure Durham, pure Ayrshire, pure Devon, and a cross of Jersey and Durham were fed on grass, hay, oil-cake, brewer's grains, meal and condiment, (an artificial compound we presume,) and the highest percentage of cream reached in five different experiments with each animal, on five different diets, was only 22, (the other percentages standing, 13, 14, 15, 16, 17, 18, 19, 20, 21): an amount surpassed even by the yield of the natives of our friend: this valuable experiment is given in full in our December number.

So far as "climate" is concerned, we suggest that perhaps the proximity of our Howard county friend to the Montgomery border, where great things are done, may have had something to do with his own high percentage of cream.

Rambles Around Alexandria.

ALEXANDRIA, VA., Jan. 9, 1875.

To the Editors of the Maryland Farmer.

I took a hasty look at some of the farms and floral establishments in and around this fine old city of Virginia, and found much to admire; besides getting a few new subscribers to the *Farmer*.

One of the most interesting institutions of the city is the fine floral establishment of the Pomeroy Brothers; they are young men of taste and industry, who have built up their business by hand labor; they have a fine collection and great variety of rare birds, rabbits, and fish, in addition to flowers and plants.

A few miles from the city is the well and neatly managed farm of Benjamin Barton. One rare thing on his place is a one-wheel implement for measuring land, made by himself; it is something like a wheel-barrow, but with a large wheel, which measures a rod at two revolutions, to which is attached a dial plate and hands, which register the distance by rods as it passes along. As he moves along the sides of the fields, he nails a tin tag on the fence, at each rod, with figures on each that shows the distances from the corner or starting place; and this is done on every side of his place, and is a fair indication of the system and care with which all his farm operations are performed; all of which proves profitable as well as pleasant. Other places will be noticed in a future letter.

At Arlington, further up the river, toward Washington, is the handsome little farm of Captain H. D. Smith, one of your stand-by subscribers; and the man who produced that best of all tomatoes, the "Arlington." By several years hybridizing with the best sorts, he has produced the spendid tomato with the above name. Baskets of it have been exhibited at the meetings of the Potomac Fruit Growers, and it has been uniformly pronounced the best for size, and form, delicious, firm meat, and beautiful red color. The writer has often eaten it, and prefers it to all others. Some of the seed will be sent to your office for trial the coming season. Not as early as the Grant, but earlier than the Trophy. All gardeners should have it. D. S. C.

THE APIARY.

Superiority of Italian Bees.

The question is frequently asked in what respect are the Italian bees superior to the common bees. The Italian bees are domesticated. They are what may be called civilized. They are given to the peaceful pursuits of collecting and storing up honey; they are more manageable, less liable to petulancy than the common black bees, which in Germany or Switzerland are the wild species. Mr. Langstroth, who has had much experience in the culture and keeping of the Italian bees, gives the following as the chief points of their superiority:

1. The Italian bees gather freely from the second or seed crop of red clover, and from other sources of forage not frequented by the common bees. In regions where late summer or fall forage is scarce, this will often make the difference between a good frofit and a heavy loss.

2. The pure Italian bees are much more peaceable than the black bee. The assertion, however, which has been made by some, that they will not sting, is not true; and the crosses between them and the black bees are often far more difficult to subdue, if once enraged, than the black bees.

3. Italian bees gather much larger stores of honey than the black bees. Dzerzon, the great German apiarian, after many years experience, says that the profits of his apiary have been double since their introduction, and we have received numerous statements showing that colonies of these bees have in this country secured a generous living, and often a surplus, where common stocks have not gained a sufficiency.

4. The Italian queens are more prolific, and keep their brood more compactly in the combs, than black queens, and their swarms are usually earlier and larger than those from black colonies.

5. In opening a hive, an Italian queen is much more readily found than a black one, not only on account of her brilliant color, but because the Italian bees are much more quiet on the combs than the black ones, and the queen is less disposed to leave the combs for the bottom board or sides of the hive.

6. Italian bees are far more inclined to supercede their queen, when past their prime, than the black bees, and colonies are therefore much less liable to become weak and queenless.

7. The Italian bees are far less disposed to rob than the common kind. The importance of this peculiarity in an apiary where movable-comb hives are used, will be readily appreciated.

8. The Italian bees defend their hive against robber bees, whether black or Italian, much more successfully than the black bees. In opening a large number of full stocks and nuclei during several seasons from April to November, we have not lost a single colony from robbery. The experience of Dzerzon on this point fully agrees with our own.

9. The Italian bees protect their combs from the ravages of the bee moth much more effectually than the black bees.

10. The Italian bees cling much more tenaciously to their combs than the common bees, so that in handling the combs the young bees which cannot fly do not, like black ones, drop on the ground or upon the person of the operator.

11. When the position of a colony is changed, the Italian workers acquaint themselves with their new location much more readily than black bees, thus greatly facilitating many important processes in the practical management of an apiary.

12. Italian workers are much longer lived than black ones, and the queenless colonies therefore do not become so rapidly depopulated.

13. Colonies of Italian bees can be united during the working season, with far less quarreling than would be incurred in uniting black ones.—The first cross between the Italian and black races is far superior to the black bees, which are improved by any mixture of Italian blood. It may also be added that the Italian bee is less subject to casualties and disease than the black bee. —*Rural Sun.*

MANAGEMENT OF STABLE-MANURE.—In a recent prize essay before the Illinois Agricultural Society, the following method is given for keeping stable-manure in the best condition: In dry weather two men and a team are employed to fill a large bin in the stable with pulverized clay, road-dust, or common soil. With this the floor of each stall is covered three inches deep, and on this layer is placed the litter, thus giving opportunity for a complete absorption of urine. This bin filled in one day with dried and pulverized earth sufficed for ten head of cattle during the stabling seasons. Dried clay was also used for the pig-pen and hen-roosts. To save manure from fire-fang it was covered with soil one inch deep. Water was occasionally applied to stop fermentation.

A COW WITH A WOODEN LEG.—An English country paper records the following fact: A young cow on the farm of Mr. Wilson, in Barrowdale, Cumberland, recently broke her leg. It was amputated, and a wooden leg supplied, and she is now walking about and doing well.

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D. Lawrence,	**C. K. Thomas,**

Thanks.—We return our thanks to the many friends of the *Farmer* who have interested themselves in our behalf by sending in large additions to our subscription lists. Notwithstanding the "hard times" we are glad to announce that the renewals and new subscriptions have exceeded any previous year, and we take it as an endorsement of the manner in which we have conducted the *Farmer* for the past year—and we promise to spare no pains to make it still more acceptable in the future. At the small sum of $1.50 per annum, or $1 for clubs of five and upwards, it is in the reach of every farmer and gardener in the country.

MARYLAND HORTICULTURAL SOCIETY.

On the 25th ult. this society held its regular monthly meeting at Raine's Hall, in this city.—Amongst other business transacted, the President, E. Whitman, Esq., chairman of the committee on Building a Horticultural Hall asked for further time to report. An interesting letter from Charles Reese, Esq., upon this subject was read.

Capt. Snow read letters from Col. Ed. Wilkins in relation to holding a Peach Exhibition, next August. The subject for discussion, was *Pears*. Mr. Marden read an instructive essay. This was followed by an interesting paper on the same subject, prepared by Capt. Snow. Other gentlemen made remarks, rendering the whole discussion highly entertaining.

The subject of ROSES, was selected for discussion at the next monthly meeting, and Mr. Pentland was requested to open the debate.

At the next meeting of the Society, to be held at Raine's Hall, February the 18th, there will be a fine display of flowers, fruits and vegetables, and a large attendance of visitors is expected. Lists of premiums offered, can be had on application to Mr. T. C. Dorsey, Secretary of the Society, at the office of the *Maryland Farmer*.

Festivities and Flowers in Washington.

A correspondent at Washington, writing under date of 28th January, among other things says :—

The approaching season of Lent, and the near close of Congress, make festivity and parties very active. The demand for flowers, for ornamenting these occasions, keep our florists very busy for the supply.

To-day I was in the splendid floral establishment of Small & Berry, where Mr. Berry and his assistants were busy arranging and putting up a large variety of floral ornaments, for a grand party, to be given to-night by Hon. Fernando Wood, and rarely ever have I seen a finer array of flowers than these; and it is hard, anywhere, to beat Small & Berry in this matter.

LEDGER CALENDAR FOR 1875.

We received from our friend, G. W. Childs, Esq., of Philadelphia, his *Public Ledger Calendar for* 1875. It is well worthy of our thanks, as a capital specimen of American Typhography. It is a small pamphlet, yet is full of useful information, *multum in parvo*. A most remarkable evidence of photographic printing accompanies it, being, the *Public Ledger* in full, on a card, the size of a postal card. To what are we coming?

STATE POULTRY SHOW.

The Poultry Show held last month in this City was not only a success but reflected the highest credit upon all who were energetic enough to ge. it up. The exhibitors deserve the highest praiset Every veriety of fowl was to be seen in the highest form and condition. The Pigeons were of every variety, and exhibited chiefly by Messrs. Tendall of Philadelphia, P. Symington and Becker, Gaddess, Mordecai, Wall and Slifer of Baltimore. Also Messrs. Pusey, Boll, Rommel, Stevens and Schwin. Mr. J. E. Lloyd, Baltimore, county Md., had on exhibition superior light Brahmas, whose noble appearance, large size and beauty of form attracted much attention. The same gentleman took first premium for a pair of fine Angora goats from Asia Minor, and also for a work of his own manufacture, called the *Artificial Mother*, which attracted great attention. This artical must prove a valuable assistant to the poulterer who breeds chickens for an early spring market. The superb display of chickens by Hon. George Colton was a surprise to his friends, they not knowing that he was so distinguished in the poultry line. His collection of the large breeds was splendid, and the game Bantams were never surpassed. The great number of premiums and added to them, the Society's grand premium, attest the great success of his efforts in poultry raising.

The Black Cayuga, White Aylsbury and Rouen Ducks were worthy of places in any exhibition in the country. The Turkies and Geese were all that could be desired. We are glad to record such a splendid triumph for the first Exhibition of Maryland Poultry, and hope the Society will continue to prosper and extend its usefulness. Every man and woman in Maryland should feel deeply interested in the welfare of this landable association.

STEAM ROAD WAGONS.—Our Paris correspondent, in his last letter, published on page 45 of this number, asks if the Farm and Road Steam Engine, described in the *Farmer* some months since by Mr. J. Wilkinson, is the Aveling & Porter pattern which he sees advertized in many European Journals. In reply we would say that it was the Williamson Engine which Mr. W. described, and is that used by D. Landreth & Sons, on their extensive seed-farm, Bloomsdale. We have recently been informed that Mr. Williamson is in Europe and that a number of his engines are in use on the other side.

THE FARMER who is too poor to take a paper devoted to his interests, will always be poor, in purse and management.

ROAD COMMITTEE MEETING.

The State Society Road Committee held a meeting at the close of the monthly meeting of the State Agricultural Society at the rooms corner Fayette and Eutaw—Dawson Lawrence in the chair, Wm. Webster, Secretary. Mr. Webster read a lengthy report, recommending a system which provides for five supervisors of roads in each Election District, the chairmen or presidents of these local Boards to constitute a Central Board of Review and Control, having exclusive supervision of the roads of the whole County: each local Board, is to divide the district into five road districts, giving each road district one member of the local Board: the supervisors to hold office five years, one retiring annually: the Central Board—composed of one member from each election district as above—to decide all cases of appeal from or pertaining to the sub-districts; to apportion the amount to be paid by each district for repairs: said tax to be levied and collected by the local supervisors and tax payers to have the privilege of working out 80 per cent. of it.

This report specifies in detail the duties of the Local and County Boards, appointment of necessary officers, subscription to the Capital Stock of any Turnpike Company (after three fifths shall have been in good faith the subscribed) of a sum equivalent to the principal of the annual average amount expended for repairs of said road bed, also for the permanent improvement by substantial reconstruction, graveling, draining, stoning, culverting, the digging of certain districts when the property holders so request, under certain restrictions.

This plan takes the matter out of the hands of politicians who make the road system a partisan agency for partisan purposes, and localizes the work of repair.

C. I. Ditty made an able and elaborate report reviewing existing systems, criticising the appointment of ignorant supervisors for partisan political services, and advocating the placing of the roads under scientific supervision, and the constant employment of a regular force on the roads for their speedy repair, as soon as injured, to save the pockets of tax payers: the regulation of details by local authorities: the appointment of special road commissioners.

The report also advocates the passage, by the General Assembly, so far as practicable, only of laws applicable over all the State to keep the volume of Public Local Laws within the smallest compass: it provides for the payment by the farmer of his road tax in labor if he so desires: and opposes the levying of a special labor tax upon non-holders of property as unconstitutional, at war with the genius

of our people, and therefore necessarily unwise and practically inoperative.

Discussion took place upon the labor tax of one, two or more days, upon each able bodied man properly qualified, and upon a vote, was rejected.

Gen. Geo. H. Stewart reported that his collection of road expenses of the different counties was not yet completed for the action of the committee.—Adjourned to meet after the close of the next yearly monthly meeting of the State Agricultural Society, February 4th at 11 A. M.

THE ENGLISH CROPS OF 1874.—From official reports recently published, and other reliable data, it appears that the English wheat crop of the past season is the largest that has been secured in Britain for many years. Out of an aggregate of 432 returns, 328 or about 76 per cent. of whole are over an average. During the eleven months, ending 30th of November last, the imports of wheat and flour exceeded the importations of the corresponding time of 1873, by over 1800 tons, and to this increase must be largely attributed the "glut" and consequent depreciation in the market. The price of wheat is very low, so low, indeed, that the economy of feeding it to stock, is engaging the attention of farmers, clubs and breeders, in all parts of the country. The barley crop, although a partial failure in some cases, owing to the early drought, is likely to prove, on the whole, the most remunerative of the cereals, being quoted in the market at one dollar per quarter higher than the best red wheat. Oats, peas, &c., are very much below the average, and prices rule high.

TOBACCO IN 1874.—The report of the Department of Agriculture for November and December says: "The depressed yield of tobacco was sufficiently forshadowed in our previous monthly reports. All the large tobacco States show results indicating a disastrous year to this productive interest. From Missouri comes the report of a new enemy to this crop, the chinch-bug. A final report of the crop of 1874 will be made after the receipt of special returns from all the principal tobacco-growing counties, including more particular and complete information which may modify in some cases the State percentages of yield published in the accompanying tables."

PREMIUM LISTS.—The premium lists for February and March meetings of the Maryland Horticultural Society are now ready for distribution, and can be had on application to the Secretary, T. C. Dorsey, at the office of the *Maryland Farmer*.

If you would not lend do not borrow.

Waste of Home Resources.

A correspondent of the Southern Farm and Home speaking of the extravagant use of commercial fertilizers to the neglect of home manures, states that in a recent journey of some extent through the South he found the plantation outhouses crammed with fertilizers. In a very few instances these were bought for cash at $60 to $70 per ton, with heavy outlays, but in the majority of cases the purchases were on time, with the addition of 20 per cent. to cash prices, payment being secured by a factor's acceptance, for which a charge was made of about 2 per cent. per month, the factor receiving a lien on crops, stock, &c. Yet at these plantations no effort was made to save home-made manure; the stable-manure which, if properly cared for, would have equaled several tons of the chemical fertilizers in value, was left uncovered and exposed to the washing of rain till rendered almost worthless.

A New England gentleman writes that during the Summer of 1871 he visited the towns in his vicinity for the purpose of observing the current methods of farm management. He found that on a large number of the farms manurial liquids were wholly wasted. More than one-half of the barns were without cellars, and the manure was thrown from their windows into the open yard, where it lay exposed to rains, causing rapid decay of the lower boards and sills of the barn, and losing a very large proportion of its valuable elements.—Yet farmers guilty of this waste were buying superphosphate at $60 per ton.

HARROWING AND ROLLING WINTER WHEAT.—The *Country Gentleman*, on this subject, says:—"We have harrowed wheat with distinct benefit. On one occasion it was harrowed three times in as many successive weeks, and the improved growth, as compared with unharrowed wheat in the same field, was obvious at a distance. The increased amount of grain was between five and six bushels per acre. The clover seed sown early in spring on the unharrowed did not do so well as that sown about a month later at the last harrowing, and when the wheat was a foot high. A "smoothing harrow" was used. This operation appears to secure much of the advantage of the English practice of cultivating in drills."

WASHING FLANNELS.—Scald flannel before you make it up, as it shrinks in the first washing.—Much of the shrinking arises from there being too much soap and the water being too cold. Never use soda for flannels.

For the Maryland Farmer.

THE TAX ON CITY REFUSE.

In this age, the farmer is dependent on the city for manure to supplement his dung heap. It is supposed that he pays all the tax thereon. Whereas the first and most important tax is extracted by the Cockney who inhales the most insidious poison therefrom before it acquires either taste or smell. If he is asthmatic, it may be congenial as a stimulus to the relaxed vesicles of his lungs as "such are unable to sleep in the country"—but thus it only affords some foundation for the old "saw"—

"Tobacco hic—when you are well it will make you sick,
But when you are sick it will make you well."

The powdered scrapings of the street fill the air when wafted by March winds, and penetrate the upper rooms in the highest house. The microscope reveals the morbid character of this dust—though collected in the attic—and although the debris of "social evils" is not confined to servants—the "court end" of all cities must ever yield (*from that source*) a larger *proportion* of this peculiar exuviæ. The sweepings of their apartments in the attics, will reveal spores and cells, which are not confined thereto, but shed upon carpets and mats which are freely shaken from the window or door-step, and blended with the atmosphere of the pavements and streets.

"If ignorance were bliss, 'twere folly to be wise."
"He who is robbed not knowing that he is robbed,
Is not robbed at all."

We are conscious of the risk when typhoid fever or diptheria may be thus distributed, but neither should be dreaded as much as the sequals of certain social evils which are more frequently and unconsciously presented to the throat and fauces, and though the particles be microscopic, they are as potent as the lymph from "small-pox" or vaccine. Secondary syphilis, eruptions or other cachexy may thus result. The acarus scabei (or itch insect) appears precisely like a crab with infinitely sharp claws and well defined eyes, though the whole animal only occupies one-third of the field of the same Lens, which cannot grasp one-half of the cornea of the eye of a fly—consequently the eggs of such animals may be easily inhaled. The city is taxed to hire the scavenger to suspend these particles in the air of the streets with his broom, and that which is not inhaled by pedestrians, is sold to the trucker, who may return it in a few weeks as cabbage or other vegetable, containing all of its offensive proximate principles—as it is demonstrated that Urea Hippuric acid, &c., are actually taken up *as such* by plants; whereas the city authorities should not allow it to be thus used—unless systematically composted for at least one year, as we hope to indicate in a subsequent essay, which will also establish the only practicable mode of presenting the diffusion of the animal poisons above referred to.

DAVID STEWART, M. D.
Formerly Chemist of Md. State Agr. Soc., &c.
January 15th, 1875.

For the Maryland Farmer.

GRAZING WITH SHEEP.

In my experience and observation, I have observed that if we had a pasture too poor to graze with horned stock, still more or less sheep could be made to live thereon, always provided we could provide fences to keep them there; but this was a rather serious case, often, for they seemed eager to find a better field where less work was required to supply their every day needs. Sheep, grazed on such fields, unless very lightly stocked with them, seldom returned much profit in fleece.—Large sheep yielding heavy fleeces would not live and do anything, consequently only small merinos, yielding a fleece of two to three pounds, of uncleansed wool, was the best we could do with it; and at the best it required from one to three acres of land to each sheep for grazing. And how about its improving as grass and grazing ground? I have noticed that a small patch of dry and airy ground is selected where the sheep herd, lie down and rest, ruminate, &c; this small patch, in time, presents a sward filled with fine grass, but largely at the expense of the balance of the field. The sheep not only select this particular herding ground for one season, but follow it up year after year, so that in time is it any wonder that we have this particular spot rich and a good sward—but where did it come from? I may have been unfortunate in my observations, &c., but I have never yet seen old fields and sandy lands brought into fair grazing grounds, as a whole, with a thick sward, by merely grazing with sheep or other stock; sheep I allow, are the best of all grazing stock for the improvement of a grazing farm, but unless the grazing land are natural to grass, having only the surface soil exhausted, or some other means of adding fertility than the bare grazing with sheep, I have failed to see where the improvement came in, so far as to its increased productiveness as grazing land. Where the sheep are fed some rich food, additional fertility is made and a show of increased productiveness is seen. But to think that grazing naturally poor grass lands with sheep is going to make it all "green fields," is something that has failed to come under the notice of the writer.

W. H. WHITE.

For the "Maryland Farmer."

Annual Meeting of the American Dairymen's Association.

DEAR SIRS:—According to my purpose expressed to you, I attended the Annual Meeting of the American Dairymen's Association, held at Utica, N. Y.

The meeting opened on the 12th of January and continued three days: three sessions per diem, in in the United States Court Room, a good sized room, but it was packed.

There were 100 or more ladies present at the daily meetings, although the weather was very cold and stormy. Mercury ranged from 11° below to 15° above. A large majority of those in attendance were from Central New York, though their were many from a distance; Maine, Kansas, and Wisconsin, were represented. It was the first of these meetings I had attended, but it was very interesting to me, and I believe was generally so considered by regular attendants.

A number of addresses were delivered, Essays read, and mooted subjects discussed by the ablest dairymen in the country. The worthy President, Hon. Horatio Seymour; the Secretary Prof. L. B. Arnold; Prof. Caldwell of Cornell University; Prof. Wilkinson of Md.; E. G. Morrow, Esq., Editor Western Farmer, Wisconsin, Secretary of Northern Dairymen's Association; Hon. H. Lewis, President New York State Agricultural Society, E. W. Stewart, editor "Live Stock Journal" by proxy; J. M. Peters in behalf of the "Butter and Cheese Exchange," of New York, and sundry others addressed the meeting and read Essays.—The papers were generally lengthly, and none of the authors seemed to feel that they had exhausted their branch of the subject.

They had apparently selected for themselves branches on which they should respectively treat, of which their was a good variety; except in the case of Prof. Wilkinson, as I was informed, was specially requested to present at the meeting drawings of his patent system of Dairy Room Construction and Ventilating and Cooling Dairy Rooms, &c., called the Gulf Stream Refrigerated Dairy.

The drawings illustrating this new and novel system of ventilating and cooling dairies, as presented by Mr. W. were large and intelligible, and his explanations of them very clear and interesting; and to my mind his system is strictly philosophical; and is, I believe, bound to work a great improvement in the manufacture and preservation of dairy products. I learned that H. A. Willard secured the drawings of Prof. W. to have them engraved to accompany a description of the Gulf Stream Dairy to be published in the "*Rural New Yorker*," and in a manual on butter-making now being prepared by Mr. Willard for publication; hence this entirely new system of ventilating and cooling dairy rooms and other structures will soon be before the world. I see that you advertise an essay by Prof. Wilkinson, on "Dairy Rooms and Dairy Farming," for which I remit. I have seen extracts from it, and desire to read it. I learned that Messrs. Avery and Wadsworth, of Madison county, N. Y., who have 18 cheese factories, employed Prof. W. to ventilate their factories on his system. If it is what it appears to be, it will be invaluable.

There were a great variety of new dairy implements exhibited, among which were two churns, neither of which have dashers of any kind. One of them is a rectangular box, hung on journals attached at opposite diagonal corners, and on one journal a crank is applied, with which to revolve it. I learned that Mr. Wilkinson secured an agency for this churn to introduce with his new dairy arrangement. It is manufactured in Wisconsin. The other box churn, which was more expensive, is simply a plain box, some three feet in length, and ten to twelve inches each way, in cross section. It does not revolve, but oscillates, dashing the cream from end to end. It is made in Massachusetts, and is very highly recommended. A cheese made from well skimmed milk, and also margarine substituted for the cream, was on exhibition, and was tested by a large number, and as far as I learned it was generally considered a good cheese. Butter that had been exposed to a long sea voyage was also exhibited and was pronounced better than much new butter.

Prof. Caldwell presented to the meeting a bottle of prepared *rennet* for cheese-makers, which seemed to be highly esteemed. The meeting was altogether very interesting, and cannot fail to exert a useful influence. Very truly yours,

E. L. B.
Rutland, Vt.

EFFECTS OF COMMERCIAL FERTILIZERS IN COLD SOILS.—A correspondent in Milton County, Northern Georgia, represents that by the use of commercial fertilizers that county has been rendered as productive in cotton as the southern portion of the State. It is an elevated region, situated on a spur of the Blue Ridge which divides the Mississippi and the Atlantic slope, and the soil is a cold red loam or rotten clay. The stimulating fertilizer gives the cotton-plant an early start, and the weather is seldom, if ever, hot enough to cause it to wither or rust.

Chester White Hogs for Anne Arundel County.

A. A. Hall, Esq., near Governor's Bridge, Anne Arundel Co., with a view to improving the breeds of hogs in his vicinity, procured, lately, from Pennsylvania, three noble specimens of this popular large breed of swine. We learn that for some years, but little attention has been given to hog raising in this county, and consequently the breeds have so deteriorated as to be too worthless to keep with a view to profit. A hog at two years old that gives a nett weight of 300 lbs. is called a heavy porker. Now, a White Chester, if well cared for, will at 10 months old weigh that much, and at 2 years old, ought to kick the beam at 900 lbs. or 1000 lbs. If the farmers will avail themselves of this opportunity now offered them, they will do wisely, and in a short time, the pork crop of that section will be increased, at less outlay than now, to the material advantage of individual and public pecuniary interests.

Pure bred hogs, well cared for and highly fed, must bring large profits and increased incomes to the farmers who will pursue this system and abandon the old plan, of common hogs and poor keep.

Small Industries—Corn-cob Pipes.

We have heretofore, and shall continue to do so, when ever an opportunity offers, urged the propriety of paying more attention to small industries and household works that can be performed by the very young—the aged and the feeble, much to their amusement and comfort. Having been presented by Mr. W. J. Morris, of Barnum's Hotel Segar Emporium with a novel Corn-cob Pipe and Stem, it naturally occurred to our mind, how many lost, restless hours of childhood and age, could be usefully and profitably employed if a little ingenuity and industry were called into activity. Corn-cob pipes have been used by certain classes for time out of mind, but the novelty of these pipes give them value in the eyes of certain smokers, although no extra cost except in neatness of finish, attends their manufacture. They can be made in half an hour, and sell for 50 cents. The only requirements are suitable cobs of sizes to suit bowl and stem with proper sized augurs to bore out the pitts, and a piece of cork, and the pipe is made in a few minutes. At even 5 or 10 cents each they would yield quite a revenue to the maker.

On no consideration should a team, or any work horse, be compelled to wear a martingale, as it draws the head down, and prevents him from getting into an easy and natural position.

BASKET WILLOW.

We are gratified to know that our article on this subject, in our last volume, has elicited an interest in the matter and that several persons are about engaging in the business of growing the basket willow. For their information and encouragement we extract the following from the U. S. Agricultural Department Report for 1872:

"Mr. A. N. Wallace, of Wyoming County, New York, eight years ago planted 2¾ acres with osier willow, (*Salix viminalis.*) The land was a light sandy loam and had been prepared by thoroughly plowing and harrowing, as for corn. The willow-cnttings, 8 inches long, were set 6 inches in the ground at an angle of 45° with the rows; the rows were 30 inches apart, and the distances between the sets in the row 6 inches. No fertilizers have been applied since planting, and there has been no cultivation except that given in the first season to a crop of beans planted between the rows. The first year's growth of osiers was cut and thrown away, and after that, on account of the scarcity of labor, no crop was taken until the third year, when the growth of two years was sold green and not peeled, at $12 per ton, averaging $131 per acre from a total crop of 30 tons. The fourth and fifth years' crops were sold at $120 per ton peeled, averaging $100 gross per acre. The sixth and seventh crops were sold green, amounted to 11 tons and 12 tons respectively, and brought $18 per ton, averaging $72 and $78.50 per acre. The crop of 1872 brought $20 per ton, green, the estimated yield being 5 tons per acre. At this price, with the present scarcity of labor, there is more profit in selling in the green state and not peeled, as the shrinkage in peeling and drying, with waste of small willows, amounts to 75 per cent. The average cost of cutting has been $12 per acre. The yield is very little affected by variations in heat and moisture, and there is no loss from insects."

Manure for Wheat.—The Delaware *State Journal* says:—"Wherever oaganic matter abounds in the soil a free use of bones and potash will speedily restore it to its original fertility. In sandy soils organic matter in the form of peat, muck or leaf mold, should be combined with the bones and potash. The finer the bones are ground the more speedy their action. If the bones are ground in a raw state, that is, without steaming or burning, and ground very fine and mixed with three times their weight of fine muck or peat, or leaf mold, and kept moist for three weeks before being used, they will generate all the ammonia necessary to the rapid growth of wheat or other growing crops, without the addition of other substances."

Good Advice to a Dyspeptic.—A gentleman saw an advertisement that a receipt for the cure of dyspepsia might be had by sending two postage stamps to the advertiser, and the answer was, "Dig in your garden and let whiskey alone."

The Structure of a Cow's Horn.

The most familiar of natural objects are often beautiful examples of engineering structure. Mr. Frank Buckland, the eminent naturalist, gives a good illustration of this in the following description of a cow's horn which we find in a recent number of *Land and Water*:—

I find that over the brain of the cow a strong roof of bone is thrown, in the shape of an arch, so as to form a substantial foundation for the horns. This roof is not solid, but is again strengthened below by a series of bony arches, that are so distributed as to form a series of hollow chambers, thus forming a structure uniting strength with lightness. The problem now is, how to fasten the horn on each side on to this buttress. The horn itself must of course be formed of horn proper, *i. e.*, hardened hair. In the rhinoceros we find a horn composed entirely of a solid mass of what is really a bunch of hair agglutinated together; but this kind of horn would have been much too heavy for the cow's convenient use. What is to be done? Why, hollow out the centre of the horn, of course; but stay—this will not do, because how is the horn to be supplied with blood-vessels? in fact, how is it to grow? Let us see how it is done by the Great Designer. Cut the horn right across with a saw, and you will find inside another horn, only made of bone. If the section is made about one third of the way down the length of the horn, you will be able to pick out a piece of bone in the shape of a cone, on which, or rather round which, the horn proper has shaped itself. This bone fits the cavity with the greatest accuracy; it is as light as the thinnest paper, and yet as strong as a cone of tin. It is everywhere perforated with holes, which in life contained the nerves, the veins, and the arteries; and we know a cow has all these in her horns: nerves, proved by the fact that cows do not like their horns touched, and that they can scratch a fly off their hides with the tip of the horn: arteries and veins, proved by the fact that a horn, when broken, will bleed, and that the horn of a living cow feels quite warm when held in the hand, besides which the nerves and arteries form a union between the internal core of bone and the external covering of horn proper.

If we now cut the rest of the horn into sections, we shall find that the inside of the bony part is really hollow, but that very strong buttresses of bone are thrown (about every inch or so) across the cavity of the horn in such a manner as to give it the greatest possible support and strength. I have cut a cow's horn and skull into several sections, to show these buttresses of bone, and now that the preparation is finished, I have another specimen to show that there is design and beauty in all created objects.

Woodland Farmer's Club—Fairfax Co., Va.

The January meeting was held at the farm of Robt. F. Roberts on the 16th January, Chalkley Gillingham in the Chair, and N. W. Peirson, Sec.

S. Pullman made some instructive remarks in regard to cows and milk.

The progress of agriculture was discussed.

Profits of Dairy business occupied some attention.

SCIENCE AND LAMP OIL.

Dr. Howland gave some interesting illustrations in chemistry and electricity, explaining the mode of preserving fruits, vegetables and meats, and showing the cause of the explosion of oil lamps, and urging the importance of each farmer or neighborhood providing themselves with a perfectly safe oil, which could be bought for 16 cents per gallon by the barrel at the refinery. The same that retails at 40 or 50 cents per gallon generally.

With his electrical battery he "shocked" as many as choose to join hands, also curled up the fingers and hands of any one who attempted to grab money placed in a basin of water.

A hearty vote of thanks was voted the Dr. for his instructing illustrations and facts.

The next meeting will be held at C. Lukens, February 20th. D. S. C.

Superphosphate of Lime.

Dr. Anderson gives the following proportion of bones and acids to be used in making superphosphate on the small scale:

One ton of inch bones, one-quarter ton of sulphuric acid, and sixty tons of boiling water. Utensils requisite, a cistern of lead and a water-can of the same metal. A small quantity of bones should be spread upon the bottom of the cistern, and the sulphuric acid poured in from the leaden water-can, at the same time that a proportionate quantity of the water is added from another can. More bones should then be thrown in, then more acid and water; in short, the process should be managed so as to mix the bones and acids as uniformly as possible. The mixture should be allowed to stand for some days before it is employed, and it should then be mixed with dried peat or soil in order to properly divide the mass.

OLD STOCK.—There is no profit in feeding stock that is past its prime. It is waste of feed and money. As soon as any animal begins to fail it should be disposed of. Old cows, old oxen, old sows, and old hens, form the bulk of the stock upon many farms. The young animals are sold off. This is the reverse of what is wise and profitable.

HORTICULTURE.

SOWING GARDEN SEEDS.

Few persons have any idea of the enormous waste from the careless sowing of seeds. The annual sales of garden seeds in the United States, may be reckoned by millions of dollars, and if we say that one fourth of all the seeds sown are wasted, we may have some idea of the enormous loss.

Most of the wasted seeds are from careless habits of sowing, or of preparation or treatment of the ground before sowing of the seeds. If a seed is good, there is no reason why every one should not grow, unless destroyed by insects or vermin, and the proportion of losses by these agencies is very small indeed. The most of the failures come from too deep sowing, or from the ground being so badly prepared that the surface dries before the seeds sprout. They dry out or rot out. Every one must have seen how seeds, when self-sown, freely grow. Let a radish or a turnip go to seed, and waste itself on the surface about the parent plant, and it makes little difference how hot or dry it may be, they will usually be found sprouting in great abundance. The decaying portions of the old plant make a little shade, and the seeds being on the surface where the gases necessary to germination can affect them, have no difficulty in growing. The mulch keeps a slight moisture so that oxygen can act, and this is about all that is needed to make a seed grow.—What is called nutrition or nourishment, is simply the destruction of one form of matter to sustain another form of life. The carbonaceous matter stored up in the seed, must be started on its road to decomposition before the living germ can make any use of it, and this is the province of the oxygen of the atmosphere and water together to do.

To get seeds to grow well then, we must prepare the soil so that the seeds shall lie on the surface where the oxygen can act,—and yet that the surface be so manipulated that it will keep moist until the seeds sprout. This is done by making the surface as *fine* and yet as *firm* as possible. A loose soil, into which one's feet sink an inch or more, is not fit for the sowing of fine seeds. The moisture escapes through the large air spaces. It is very different, however, when the spaces are small—say about the diameter of fine sewing needles. Dry air does not penetrate here. It is moist air, and this is just what we want. *Thorough pulvèrization* is the technical term. The thorough crushing of every particle of earth to powder.

Farmers seem to understand this better than gardeners. They plough and then roll the ground. The rolling is not to make the ground hard, but to pulverize it. Before the rolling, one's feet will sink several inches into the loosened ground, afterwards scarcely an impression is made,—and yet every good farmer knows the firm ground is best for the seed. It is quite certain that if this principle was as well understood in gardening, not half the seed would be required that is generally employed. No one ever thinks of using a roller in a vegetable garden. The soil is loose, and soon dries out,—and hence the seed has to be deeply put in to keep them moist. If a very dry time comes it is all right; but with rain, the surface packs, as gardeners call it, and the oxygen being cut off, the food matter of the seeds, started on decomposition, decays and the germ goes with it.

If the soil is made as fine and firm as it ought to be, the most delicate seeds need no more than a pressing in from the surface. A farmer friend of the writer is one of the most successful turnip raisers. He sows his seed broadcast, but never harrows them in. The ground is ploughed and rolled, then the seed sown and the ground again rolled, pressing the seeds into the soil. It seems to make no difference with his crop whether there is rain immediately after sowing or not. Every seed seems to grow every season. They come up at once without waiting for rain,—and are ready to grow when the rain comes. It might be just the same in the garden. Then one could depend on every grain of the finest seed growing as surely as the larger ones of corn or beans, and when this certainty is arrived at, there is not only the saving in seed, but in subsequent trimming out which is always a nuisance.

Bouquets.—It is stated that more bouquets (not buttonhole) are made up in a single month in the city of New York than in the course of a whole year in the city of London. This is, perhaps, a trifling exaggeration, but Mr. Dickens said very much the same thing in writing of his American experience several years ago, so that it is evident that our love for flowers is sufficiently conspicuous to attract the attention of foreigners.

Wealth without intelligence is not worth having.

POPULAR SHADE TREES.

The best shade trees to plant will depend on the situation and circumstances. Fast growing trees are always popular, and of these the poplars have long been famous. Indeed the scientific name, *Populus*, is derived from this fact. It was the common shade tree of the Romans and was extensively planted along the streets of the Eternal City, and hence *populus*—the tree of the people. The true poplar of that period however does not seem to be much in use here. The Gray Poplar, *populus canescens*, and the Silver Poplar, *populus alba*, are the kinds in common use with us. They are however terrible things for the throwing up sprouts all around, and though this is of no consequence in closely built up streets in large cities, it is a great objection in yards or gardens. The Lombardy Poplar which grows up like a church spire, is merely ornamental and of no use for shade. Some times the Carolina Poplar, and the Western Poplar species of cotton wood are employed; but except their rapid growth, and cheerful adaptation to any kind of a city atmosphere, there is not much to recommend them. They do very well till better things grow up to take their places.

Among the Willows the weeping is the only one in general use. It is a good thing to make shade for stables, barns, spring-houses, boat-houses and and other such things; and it grows with great rapidity, and has an airy coolness few other things have. It should be cut back every few years however so as to make a continuous succession of young wood. If left to grow as it will in time large numbers of the weaker branches die, and a continual litter is the result.

The Maples are the most popular of American shade trees, and the Silver Maple the most popular of all. It is to America, what the poplar is to the Italians, the tree of the people. It grows fast and has an agreeable shade, yet it has some defects, and prominently is a sprawly growth, which in time leaves all the lower parts naked, and makes no shade for where the shade is desired; and then this long loose habit of throwing out its main branches causes many to split off in heavy rain, snow, or wind storms. The Sugar Maple stands next in popularity. It grows rather fast; but does not spread well. Its beautiful autumn tints also gains for it many friends of late years. The Norway Maple has become very popular in Northern and Western Cities, though we do not yet see it often in Baltimore, or points further South. It grows slower than either of the other two but the head is very regular and symmetrical and so does not need cutting back to make a shade low down. The leaves are large and glossy, and it is eminently a shade tree. Its near neighbor, the Scotch Maple or false plane is often employed north, though not well adapted to Southern uses, as its young leaves burn badly by the sun. In growth and general characteristics it is intermediate between the Sugar and Norway Maples. Perhaps the tree which next enjoys popularity with tasteful planters for shade is the Linden. They grow rather large in time for street trees, but it takes so many years before this objection arises, that it is seldom thought of. The American is best suited to Southern planters. The European does not do well in very hot aspects. It is subject to diseases and injurious insects under such circumstances.

The Horse Chestnut is another tree which we in the South, cannot have to the same perfection as northern people. Its leaves fall so early, that at the time when we best need shade it gives little and looks unsightly. Still it is so beautiful in early Spring, that people are very apt to overlook its defects. It grows about in the same ratio as the Norway Maple. It thrives best in a rich stony soil. Our native Ohio species is often used, but does not make near so pretty a tree as the foreign species.

As we go South and West we find the yellow Locust, and in some instances the Ailanthus used for shade, but these soon become shabby looking, and are not very desirable, though they grow fast, and the former has sweet flowers. The Paulowina is in some repute as a very fast grower. It has a coarse appearance, and its flowers are pretty and sweet; but its dry seed vessels which hang a year or more on the tree make it unsightly. These are the most popular trees in common use. There are others not so well known but which are sometimes used among the Magnolias, Sugar Berries, the pride of China, Ashes, and in some cases Oaks and Tulip trees; and no doubt when more attention has been given to our native trees, we shall find many quite as well adapted to shade trees, as many we now value so much.

EARLY CABBAGES.

Some sow these in the fall of the year, and preserve them over winter in shallow frames protected by boards, and set them out in the spring. This, however, calls for a good deal of winter care. On fine days, the boards have to be elevated to avoid damp, and the board shutters themselves are no mean expense. Besides all this, they are very apt to run to seed if the winter is mild, or the plants extra strong before they are set out. If one can command a small quantity of stable manure, it is just as well to make a small hot bed, and start the plants early. This can be done at once and plants can then be had in time for spring planting. A one light frame will be large enough to raise several thousand plants. It does not need much heat. A single cart load of hot stable manure is enough for a frame of a single sash. The seeds soon sprout, and if air is given to prevent them drawing too much, the plants will soon get hard and stalky for setting out.

A NEW EUONYMUS.

Every one knows the burning bush, as it is one of the most common plants in old farm gardens. The one most commonly seen is the English species, though the American, as it is called, is by no means uncommon. They look alike to general observers, but the American has broader leaves, and these are of a bright purple color in fall, and besides drop earlier in the season. The European leaves are narrow, and besides remaining on the plant late, die green, and without any of the colored tints that characterize so many American trees. The seed vessels of both are much alike, and the bright colors which they exhibit in fall and early winter has given the common name of *Burning Bush*. What is known in gardens as the

American Euonymus, though it is an American plant, is not, if we may credit the botany books, the *Euonymus Americanus*, for this is described as being a sort of weak trailing shrub, with leaves almost or quite evergreen. The evergreen Euonymus in cultivation is a different looking plant from our common burning bushes, and no one would know them for burning bushes unless they saw the fruit or berries which then shows its true character. The roundish green leaves look more like those of coarse box leaves. It ought to be more common in Maryland and Virginia than it seems to be. In Georgia and South Carolina, we meet with it everywhere. It is very easily raised from cuttings, which, put in in the fall, grow and make roots at once the next spring. It is a native of Japan, and is often called the Japan Euonymus, or burning bush. There are in cultivation several varieties, some with white-edged leaves, with leaves gold-edged, and one with a large spot of gold in the middle of the leaf.

Recently we have seen in some of our nurseries a new one called *Euonymus radicans variegata*, of which we give an illustration with this. It is said also to come from Japan, and is variegated, as shown in the cut. The margin of the leaf is white, and the interior part green, but the green towards the fall is a rosy tint. It is found to be very hardy, and the florists say is destined to be one of the most popular of nursery plants. It is rather a low bush, and is somewhat trailing and rooting when young; but they say it rises and forms as large a bush as the Pyracantha with age.

VEGETABLE SEEDS TO THE ACRE.

It is often a question how many seeds to procure for sowing. The followiug table gives the quantity of the leading articles usually sown to the acre. Of course, it is important to get good seeds. Some few seedsmen mix bad seed with the good, excusing themselves on the ground that people always sow too thick. Few of good character do this of course. It is always best to examine seeds carefully before sowing. The tables are intended for good new seed:

Beans, dwarf in drills	1 to 1½ bush.
Beans, Pole, in hills	10 to 12 qts.
Beets, in drills	5 to 6 lbs.
Cabbage, in beds to transplant	¼ lb.
Carrot, in drills	3 to 4 lbs.
Corn, in hills 3x3	8 to 10 qts.
Corn, for Soiling, 4x4	3 bush.
Cucumber, in hills	2 lbs.
Mustard, broadcast	½ bush.
Melon, Musk, in hills	2 lbs.
Melon, Water, in hills	3 to 4 lbs.
Onion, in drills	4 lbs.
Onion, for Sets, in drills	6 to 12 bush.
Parsnip, in drills	3 to 6 lbs.
Peas, in drills	1½ bush.
Peas, broadcast	3 bush
Potato, (cut tubers)	4 to 10 bush.
Pumpkin, (in hills)	4 to 6 lbs.
Radish, in drills	8 to 10 lbs.
Sage in drills	8 to 10 lbs.
Salsify, in drills	8 to 10 bush.
Spinach, in drills	10 to 12 lbs.
Squash, (running varieties,) in hills	3 lbs.
Squash, (bush varieties,) in hills	4 lbs.
Tomato, to transplant	¼ lb.
Turnip, in drills	1 to 2 lbs.
Turnip, broadcast	3 to 4 lbs
Barley, broadcast	2 to 3 bush.
Broom Corn, in hills	8 to 10 qts.
Clover, Red, alone	10 to 15 lbs.
Clover, White alone	10 to 12 lbs.
Clover, Alsike, alone	8 lbs.
Clover, Lucerne, alone	20 lbs.
Grass Mixed Lawn	2 bush.
Oats, broadcast	2 to 3 bush
Rye, broadcast	1½ to 2 bush.
Vetches, broadcast	2 to 3 bush.
Wheat, broadcast	1 to 1½ bush.
Timothy, alone	½ bush.
Millet	½ to 1 bush.

The young farmer in selecting a farm should not over look the near church and school house.

HEDGE PLANTS.

At this season of the year the proper treatment of hedge plants deserves a word. Wherever feneing timber becomes searee, we naturally turn to living plants as a substitute. It is very difficult to get plants that are just suited to the purpose. Very fast growing things soon get too large, if left to themselves, and if we take shrubby things that never naturally reach a great height, they are so long in making a good hedge that we lose all patienee with them. Thus it comes about that small trees, like osage orange and honey locust, are often the most popular.

Though they grow naturally as trees, they grow fast, and we trust to keep them effective by trimming.

Unfortunately most persons who plant these know nothing of the prineiples of pruning, and so we very seldom see a hedge of these plants that is not either spoiled by bad pruning, else a nuisance by neglect.

All those who are able to tell us what is right in hedge practiee unite in saying that these fast growing hedge plants should be pruned in Summer time, while the growth is yet green and soft; and that they should be pruned so that the faees slope so that the sun for most of the day can shed its light on each leaf. Where this attention can be given, there is no doubt but that the stronger the hedge ean be grown the better hedge it will make.

If these preeautions are to be negleeted a strong growth will only help to make the hedge a nuisance.

Presuming that those who have these hedge plants really mean to look after them in this intelligent way, we may at this season take some steps to insure a good strong growth in hedges that have been neglected, or in any way weakened by bad treatment.

If any manure can be had easily, a top dressing will be very beneficial. If it has been for years negleeted the better plan is to cut it down quite to the ground, when a new crop of vigorous young shoots will come up, whieh in the early summer time when the growth is young, can be cut into the shape deseribed. In this ease some of the stems will be large and strong, and will push more vigorous shoots than the weaker ones. It will be very desirable in the new growth for all to push of equal vigour. To help this, manure may be placed on the weaker places and none on the stronger ones. Sometimes some have died out in places, leaving several feet in which are no plants. The natural thought is to procure fresh plants and fill in, but we have rarely found this do any good. If some old stumps can be found anywhere of about equal size and strength, it might do; but these weak plants soon become smothered and starved out.—Where large ones cannot be had, the better plan is before the old plants are cut down, to bend strong shoots over, and peg them down so as to completely stop the gap.

In bending strong shoots down for this purpose they should be half cut through, in order to get them down easily. This eut should be made on the inside—that is, the side towards whieh the shoot is to be drawn. This will prevent them from snapping off. A notch must be made, that is to say, a small piece eut entirely out, when the braneh is then drawn down, it will come so that nothing is broken. It bends easily.

THE ENGLISH WALNUT.

Among the fruits seldom seen in Maryland, and yet particularly well adapted to its climate, is the English walnut or Madeira nut. We have seen it in the Northern part of the State, in one or two instanees bearing so freely as to yield ten or twelve bushels a year,—and these trees evidently not in their prime. The owner of one of these trees told us he got easily, $2.50 per bushel for them, and could probably get more if he tried. In this State we believe there would hardly be a year when they would not produee fruit, which seems not to be the ease further North. A Pennsylvania friend once told the writer that there it only fruited on an average, about every three years. If one can get, say $20 a year from a single tree, and tolerably regular at that, it is a tolerably good thing to have.

The tree is very easily satisfied in its conditions of growth. Any rich garden soil suits it. For a few years from seed, the upper portion of the branches does not seem to mature, and are killed in the winter; but after five or six years, there is no further trouble of this kind. It is an excellent tree to plant in odd corners and waste plaees, and many a spot on one's ground, nothing but an eye sore or receptacle for rubbish, may be made profitable and beautiful by sticking in an English walnut tree. Many do not plant these things, for fear they may not see them bear fruit. The walnut does not bear freely under twelve or fifteen years, but it eosts little to plant,—and then one may live to enjoy the fruit,—at any rate there is a pleasure in seeing them grow.

Do you know that camphorated water steeped in a cloth saturated with the liquid, will foree generation in seeds, the vitality of which is almost extinct?

EARLY TOMATOES.

When tomato planting time comes round, people often have a great run around to get plants, when it is very easy to have all we need without much trouble. They are very easy grown as window plants. Small soap boxes, cut in half so as to make them shallow, and holes bored in the bottom so as to allow the surplus moisture to escape, make excellent vessels for raising plants. After so doing they can be put in any dark warm place. In a few days they will sprout, and then they can be put in the window, where the sun's light can fall on them. As they come up and grow thickly, they can be thinned; and the plants drawn out, set in another box, if a good quantity is desired. Few ordinary gardens however need more than a hundred plants, and these an ordinary soap box, such as we have described, will hold very well till the time of planting arrives. The tomato is easily grown as a window plant, and in this way every body can have plants without the trouble of hunting for them.

Fruit Soils and Culture.

At a meeting of Pennsylvania Fruit Growers' Society, the following interesting discussion was had:—

Paschall Morris said that more depends upon the after-culture of fruit than upon the soil itself.—Strong clays were suggested for the pear, and confirmatory instances were cited. He declared his ability to insure blight at any time by highly stimulating the soil in almost any locality, and thus show that the epidemic is not confined to any one character of land. The disease of the cherry, the yellows of the peach, &c., may be attributed to high cultivation rather than certain peculiarities of the soil. He favored low branching as a preventive of disease, and is especially desirous of seeing our fruit men turn their attention to shelter belts. Mulching is also highly beneficial, and above all, applications of potash to the soil in the place of stimulating animal manures. These will, assuredly, counteract the evils resulting in many cases from uncongenial soils.

Thomas Meehan agreed in regard to cultivation, and believes that far more depends upon it than upon the soil. Several other speakers assented.

Mr. Engle stated that for light soils peaches and cherries are always the most profitable; grapes prefer light to heavy soils, but will flourish in either, and the pear does decidedly best in heavy soils.

William Saunders, of Washington, instanced two orchards in the same locality on entirely opposite characters of soil, each equally successful.

The Rev. Mr. Calder, of the State Agricultural College, on the subject of grape culture, said that wet soils are to be avoided more than anything else. Excessive pruning is very damaging to our crops, foreign gardeners soon find when they undertake to prune our native grapes, that the practice will not prove remunerative. Clinton, especially, will not bear heavy pruning. The Concord will bear it rather better, but yet even this variety should have sufficient space. The introduction of toads into his own vineyard has proved useful as a destructive agency against insects, with which grape-growers must carry on a constant warfare.

Mr. Meehan opposed trenching and an expensive preparation of the soil of vineyards.

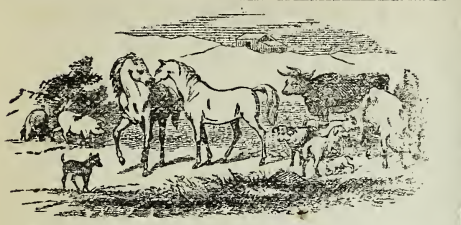
Prof. Heiges, after fully testing the renewal system, now prunes not at all, and his vines succeed far better than ever before. The pear blight, according to one member, is confined to certain localities and varieties. The Vicar, Glout Morceau, Madelaine, Doyenne d'Ete and Belle Lucrative are the most liable to its attacks; Seckel appears remarkably exempt from blight, as well as the Duchesse. Mr. Meehan thinks no kinds are exempt, and mentioned instances where the Seckel was the most liable to be destroyed. Mr. Saunders was of the same opinion.

THE CANADA FARMER.—The January number of this standard monthly is received, and is filled with a variety of matter on agricultural, horticulture and rural affairs. This January number is highly improved in its typography, with an illustrated cover, which gives it an attractive appearance. It is published at Toronto, Canada, at $1 per annum, free of postage.

THE PRACTICAL FARMER.—This is a first-class farmer's paper, and deserves the patronage of every man who "means business" as a cultivator. How any one interested in agriculture in this latitude can do without it we cannot conceive—then it is so cheap—only $1.50 a year. If you are not satified with that *we* will send you the MARYLAND FARMER and PRACTICAL FARMER one year, for $2—the MARYLAND FARMER postage *prepaid*.

LIVE STOCK JOURNAL FOR JANUARY.—The first number of the new year has just reached us, and is full of information upon its dozen specialties. The Dairy has 7 articles, Horses 6, Cattle 8, Farm 7, Poultry 6, Sheep 5, Swine 8, Bees 3, Fish 6, a Hopper treating of everything, Veterinary treats of 9 cases of disease; Turf Stock Sales, with an original story and much that owns even a horse, a cow or poultry, should subscribe. Only $1.60 per year, postage paid. Specimen, 10 cents. Buffalo, N. Y.

Live Stock Register.



The History of Cotswold Sheep.

We quote the following from an address on long-wooled breeds by Mr. Smith, a prominent handler of sheep of Westend, England. In relation to the Cotswolds, Mr. Smith says:

"The Cotswold sheep are supposed to derive their name from the "cots" or sheds from which they were fed in Winter, and from the "wolds" or open hilly grounds on which they were pastured in Summer. I believe them to be the original breed of the long-wool sheep, as they are continually spoken of from the earliest times when no other sheep are noticed.

I find that Gloucestershire was the earliest trading district for native wool in England. Gloucester had its trade companies and guildhall long before one was established in London. In the thirteenth century, Cirencester has to markets—one on Monday for corn, and one on Friday for wool. The monumental brasses in the church at Cirencester and at Northleach were paid for in Cotswold wool to foreign artists. That attests the importance of the wool trade at that period. A part of Northleach Church was built by Henry Forty, a wool-dealer, who died in 1400 at Cirencester. One of those interesting brasses is to the memory of Robert Page; he also was a wool-dealer, and died in 1434. The immense quantity of wool grown in the county of Gloucester is apparent from the fact that, in the reign of Edward III, 50,000 sacks of native Cotswold wool was the annual quantity granted from that county for the King's household.

In the fifteenth century, both sheep and wool were largely exported. In 1437, Don Durantee, King of Portugal, applied to Henry VI. for permission to export sixty sacks of Cotswold wool to manufacture certain cloth of gold for his own private use. At this time the wool of the Cotswold sheep stood unrivaled in point of excellence, and bore a higher price than any other kind of wool. It is said to have been worth four shillings per pound at the present value of money. It continued nearly a century to realize that price in consequence of the great demand for the manufacture of the beautiful fabrics, such as cloth of gold, &c. Cotswold sheep were undoubtedly considered the best animals England could produce at that period, as a proof of which I might say that if one monarch made a present of animals to another it would be what he considered the best in his kingdom.—In 1464, a present of Cotswold sheep was made by Edward IV. to Henry of Castile, and in 1468 another lot of Cotswold sheep was sent to John of Arragon, both designed to improve the Spanish breed of sheep.

In the reign of Queen Elizabeth, the Cotswold sheep are described as a coarse, large-boned, long-wool sheep. They have undergone a great change and improvement since that time. Notwithstanding the improvement in most breeds of sheep, the Cotswold holds by far the pre-eminence. Their beautiful and immense frames, their fine countenance, and fullest fleece give them a grand, majestic appearance, such as no other breed of sheep have ever yet attained. I think them the best sheep in existence, and will produce more mutton and wool for the food they consume than any other breed of sheep.

The Cotswold, although large sheep, have big backs and little bellies, and will not consume so much food as some smaller sheep that have little backs and great bellies. The Cotswold are entirely in the possession of tenant-farmers—not pushed into public estimation by noblemen, as some other breeds are, but have risen and spread themselves all over England, and most other countries, from their own just merits, without the assistance of the great man. Nearly fifty years past the Cotswold ram-breeders all used a Leicester ram. That greatly improved their flocks, giving them better symmetry, better quality, and more aptitude to fatten. Before the introduction of the Leicesters, many of them were gray, but are since mostly white. I have always used gray sheep, but pure Cotswold. My flocks are the Cotswold grays.

A good Cotswold sheep has a large, wide frame, with abundance of valuable wool, a large head, eyes wide from each other across the forhead, not long from the eye to the nose, jaw deep and tapering to tne mouth, ears long and fine, the head well covered with wool, a grand arched neck, set on high, ribs well sprung out from the back and chines, shoulders well set back into the chines, a prominent, full, expanded chest, deep foreflanks, wide back and loin, rump nicely formed all round from one loin to the other, heavy leg of mutton, good and full in the twist, moderate-sized bone, feet small, clean, and upright in the posterior, or fetlock joints. I think that description will bear me out in calling the Cotswold sheep a grand, majestic animal."

Gain in Cattle.

It takes eleven pounds of milk to add one pound of live weight to a calf; and an ox that weighs one thousand three hundred pounds will consume twenty-two pounds of hay in twenty-four hours to keep from losing weight. If he is to fatten he must have just twice that quantity, when he will gain two pounds a day. This is one pound live weight to eleven pounds good hay. To obtain fifty cents a hundred for his hay, a farmer must sell fat steers at five dollars and fifty cents per hundred pounds.

HYBROPHOBIA AMONG SHEEP.—A dog worried and bit several sheep in Sussex, England—bet them about the mouth so that they were unable to graze. They were carefully treated, turned out to pasture and appeared, for a time, to be progressing favorably, but finally they began barking like a dog and would fly at any one who came near them. A veterinary surgeon finally ordered them to be killed.

USEFUL RECIPES.

TREATMENT OF SPAVIN.—There are two kinds of spavin, blood spavin and bone spavin. The treatment for bone spavin will be first to remove the hair with a scissors from the tumor or bunch, and then rub the part for twenty minutes with a little of the following ointment: Cantharides, pulv., 2 dr ; biniodide of mercury, 1 dr.; lard, 2 oz.; mix. After the part has been thoroughly rubbed with the ointment, tie the colt's head up for twenty-four hours, so as not to bite the dressing. Apply lard or oil on the third day, and every few days after, until the scab drops off.

SULPHUR FOR SHEEP.— Geo. S. Robinson of Vermont, writes the Rural New Yorker: "I know, from twenty years trial, that sulphur fed to sheep in their salt, will drive away and keep away ticks—about a table-spoonful to two quarts of salt, well mixed, twice a month, through the summer.

LINIMENT FOR WOUNDS AND SPRAINS.—Horses and cattle are liable to sprains in cold weather from slipping on the ice, and horses often get "caked." I have found the following an excellent embrocation for such injuries. It should be well rubbed in when applied to sprains. It is good for rheumatism if well rubbed in while exposed to a hot fire:

Oils origanum anise and spike, each 1 oz.; spirits of turpentine, 1 oz.; aqua ammonia, 1 oz , and alcohol, 3 oz. Shake well before using. The bottle should be kept securely corked.

ROUP IN FOWLS —The *Live Stock Journal* says: To one pint of water add one teaspoonful of carbolic acid, and wash the beak and throat with it often enough to remove the mucous discharge as fast as it appears. If carbolic acid cannot be conveniently obtained, vinegar will do, though it is not near as good. Mix powdered charcoal with the soft food, meal dough, or smashed potatoes, which are to be fed to the fowl, hard grain not being admissable. The benefit of the charcoal is to neutralize the poisonous mucous which the bird will swallow, to the detriment of the digestive organs, in spite of the careful washing prescribed. Keep the patient in a dry, warm, sunny place, apart from other fowls. Most cases will need no other treatment, and will recover. If the type of the disease prevailing in a locality is unusually severe, as sometimes occurs, and a considerable percentage of the birds die, resort must be had to the German roup pills, made by Fidel Kunkle.

SPRAIN OF PASTERN —Every night apply a good cold water bandage, and if that is not successful, apply a sharp blister all around the joint.

SCRATCHES.—Make a thick paste of pulverized gunpowder, two parts, and common salt, one part, diluted in strong vegetable vinegar, and rub in well twice each day.

GRAVEL IN HORSES.—The *American Stock Journal* says for gravel in horses, give two-thirds of a tablespoonful of saltpeter in a little salt, for three consecu ive days.

RINGING HOGS —The best way we have ever found of ringing hogs is to make a noose on the end of a strap or cord. Slip this over the animals upper jaw above the tusks, pass the other end around a rail in the fence or post, draw the hog close enough so that he cannot have to much play; give the rope to a child to hold, and go to work—he is perfectly gentle.

LADIES DEPARTMENT.

A Chat with the Ladies for FEBRUARY.

BY PATUXENT PLANTER.

"Ah! tell me not that memory
Sheds gladness o'er the past:
What is recalled by faded flowers
Save that they do not last?
Were it not better to forget,
Than but remember and regret?"

It is possible that in the progress of improvement contemplated in the future conduct of the *Maryland Farmer*, these chats, so agreeable to the writer, each month for the three past years, may cease. If so, in the words of the poet,—

Were it not better, (them) to forget,
Than but remember and regret?

Aye, who, but he, should have cause to regret their discontinuance?

It is to be hoped that the long spell of cold, icy, sleety weather which ushered in the New Year, was enlivened by blooming flowers within doors and entertaining books and light reading, with all other pleasant adjuncts to keep the mind cheerful and hearts warm, in spite of the dreary scenes out of doors.—What an opportunity in the country, does winter offer for mental culture and the practical education of the young ladies in all the varied departments of useful house-hold knowledge best fitted to make them useful and honored matrons in the future of their lives.

How much more sensible and praise-worthy, and calculated to elevate the female character, is a winter so spent, than, one which is dissipated in routes and balls, seeing the *Black Crook* or beholding the sad spectacle of one *Led Astray*.

Owing to the stagnation of business of all sorts, to destructive fires, freshets, storms, and unparrelled ruin of crops over large areas of country, great distress has been brought upon thousands in our land and especially in the large cities and on isolated, thinly settled sections in the West, calling for the exercise of human charity to its utmost extent this winter. I am glad to say that Baltimore has had less suffering among the poor than most of her sister cities, owing to the extensive and well managed humanitarian organizations that to the credit of her citizens be it said, are supported with great liberality and aided by the zealous personal efforts of her Christian men and noble minded women, all carried on without offensive ostentation and in the meek, genuine Samaritan spirit. In this respect the ladies of our beautiful city, are worthy of admiration, and their example should be followed.

It must be remembered that charity does not always consist in the giving of alms, and indiscriminate giving ought to be avoided, it often leads to wrong instead of good There are various ways in which the greatest beneficence is bestowed, such as furnishing clothes to the children, food to the helpless and nourishment to the sick. It is the wisest charity often, to give work to those out of employment instead of either food or money Charity is practiced and seen sometimes most sensibly in kind words, gentle admonition and good advice, backed with the zealous support of the giver in reclaiming those who have erred or may still be on the downward path.

In these and many other ways, without any money expense, great help, enlarged charity may be extended to the suffering, the unfortunate and the impecunious. How many a distressed family, too proud to beg, might be relieved if hunted up and found, and how many a brand might be saved from the burning, by a small effort on the part of those who really desire to be charitable.

But a truce to moralizing.

Let us come to the matter of fact, *household duties.*—Have you made provision or settled in your own minds to have this year, a good garden, fruits, flowers, poultry, some good cows, a few bee-hives, and also to raise pigeons? These things in the beginning, cost but little, and will repay their cost and double it the first year, and is all that a reasonable country family should want to be comfortable, healthy and happy, provided there be content and self-sacrificing dispositions among the different members, so that the work will progress harmoniously.

This is the time to *think* and act as to what you mean to have for flowers next summer. Get "*Vick's Rural Guide*", or any other reliable Floral Directory, from the North, but also be sure not to neglect those near home and get *Halladay's* splendid catalogue and, those of other Baltimore Florists; from these, after careful study and reflection, decide where to buy and *what you want.* Buy no more than you can do justice to. Do not believe that all you have to do is to buy a plant and set it out, and let it shift for itself. No, you must in justice to yourself and the florist, study the nature of the plant, and follow the directions as to its culture. In this way you will slowly acquire a knowledge of the habits and requirements of plants and imperceptibly you will acquire a partial knowledge of botany and that will force you to become a student of that enchanting science. I address myself now to our lady friends who cultivate their own flowers, not employing a professional gardener at a cost equivalent to a music, German and French teacher. The taste for flowers has increased of late years to such an extent that no lady of refinement is supposed to be without some evidences of a love of flowers and a participation in the popular taste.—Every cot has its embowering climbers and hanging baskets, as every palatial residence, its green houses and conservatories, the sweet retreats for lovers and love-musings.

This is the season when you who desire to increase and improve your stock of poultry should secure the best specimens of such breeds as you may determine to try the coming year. There is, as I have more than once said to you in these confidential chats, too little attention paid to poultry raising, both on the score of economy and pleasant amusement. Could you have seen the superb display of pigeons, and every variety of domestic birds at the Maryland State Poultry Show, held last month in Baltimore, I am sure each and all of you would have become inspired with a desire to raise poultry extensively, for profit and as beautiful ornaments for the lawn. The bronze turkies, the geese, ducks, brahma and other chickens, were huge and marked as pe fectly as the markings of wild fowl. Among the ornamental classes were the white Guinea fowl, turkies and Pea Fowls, with the proud little Bantams of every color. But above all, and to my fancy the loveliest birds I ever saw, was the premium Game Bantams of Mr. G. Colton. Nothing could be more exquisite than such birds on the lawn and among the flowers.

Why is it that our friends continue to raise the common barn-yard fowls—chickens weighing dressed 2 lbs.; turkies an average of 8 to 10 lbs.; ducks, 2 to 4 lbs. when the same care and food with improved breeds would quadruple those weights? It is but to see and compare the different breeds, to be convinced of the propriety of a total revolution in poultry raising. I am glad to know that many ladies have resolved to commence this good work the present year.—A few hundred pounds of nicely dressed, fat poultry would command a nice little pile of pocket money.—Remember that the average price of good poultry of all descriptions rarely if ever, falls below 12 to 14 cts. per pound by the wholesale. A well fatted Brahma chicken, eight months old, will readily bring from 75 cts. to $1 in the market. This is certainly encouraging.

CATALOGUES RECEIVED, &c.

From Mr. Robert J. Halliday of Baltimore, his seed and Plant Catalogue for 1875. This Catalogue reflects great credit upon the extensive establishment of this eminent florist It is elegantly gotten up, and embellished with beautiful colored engravings of Roses and other flowers, besides a large number of fine wood-cut illustrations. As a Baltimore work, we hail it with great pleasure.

From Mr Peter Henderson, New York, his Catalogue of Plants for 1875 They are both neatly printed, contain much useful matter and profusely illustrated. The Seed Catalogue is splendidly embellished with colored lithographs, one being a boquet of rare roses, another, a fine collection of lovely Pinks and Dianthus; a beautiful collection of Verbenas, and also a colored print of Henderson's early Summer Cabbage.

From B. K. Bliss & Sons, No 34 Barclay Street, New York, their Descriptive Catalogue of choice Vegetable, Agricultural and Flower Seeds, Gladiolus, Lilies, &c. This catalogue is gotten up in a very superior manner, numerously embellished with fine engravings, together with a very beautiful colored lithograph of Truffant's French Perfection Asters, and also a colored group of Seedling Double Petunias, which are really charming. The catalogue contains 200 pages and can be had by sending 25 cents as above. Don't fail to send.

From James J H. Gregory, Marblehead, Mass., Annual Circular and Retail Catalogue of Vegetable and Flower Seeds—illustrated.

From Ellwanger & Barry, Rochester, New York, their spring catalogue for 1875. Also catalogue of Fruits—and catalogue of ornamental trees, &c.

From J. A. Anderson, Manhattan, Kansas, a copy of "Hand-book of the Kansas State Agricultural College, at Manhattan, Kansas." This pamphlet is a hand-book of the college, rather than a mere catalogue; and is intended to answer the many different enquiries, respecting wholly dissimilar matters which are received.

☞Attention is directed to the advertisement of Ellwanger & Barry, Nurserymen, Rochester, N. Y.—As is well known, they are the largest and most successful growers of Fruit and Ornamental Trees, Shrubs and Plants in the United States Parties wanting anything in their line will do well to send for their Illustrated and Descriptive Catalogues.

NEW ADVERTISEMENTS.

J. Cook, Small Fruits for Spring planting.
R. J. Halliday, New Illustrated Catalogue
Crosman Bro's Catalogue and Guide for 1875.
Ellwanger & Barry, Trees, &c.
L. C. Amsden, Amsden Peach.
Dr. H. Schroder, 500,000 Grape Vines for Sale.
G. Stinson & Co, $5 to $20 per day.
Chas. B. Moore, Jersey Cattle, Berkshire Pigs, &c.
M. Perine & Sons, Flower Pots, &c.
Nash Brothers, True's Potato Planter.
Symington Bros. & Co., Oil Vitriol, &c.
C. B Rogers, Extra Early Peas, &c
S. W. Ficklin, Belmont Stock Farm.
E. Whitman & Sons, Coltons Harrow.
J. C. Higgins, Dark Brahmas.
Louis Bagger & Co., Solicitors of Patents.
C. G. Shipley, Channel Island Bulls.
Randolph Peters, Early Beatrice and other Peaches.

BALTIMORE MARKETS--Feb. 4.

Prepared for the "Maryland Farmer" by **GILLMORE & ROGERS**, Produce Commission Merchants, 159 W. Pratt st.

[*Unless when otherwise specified the prices are wholesale.*]

ASHES.—Pots quiet at $6 00@$6 25.

BEESWAX.—28@29 cts.

BROOM CORN.—Active at 6½@10 cts.

COFFEE.—prices range from 18½@22½cts. for ordinary to choice, gold duty paid.

COTTON.—Market firm—Ordinary, 14 cts; Good Ordinary 14½ cts; Low Middling, 14¾ cts; Middling, 15¼ cts; Good Middling, 15½ cts; Middling Fair, 16 cts

EGGS.—Fresh lots—Md and Pa., case, 26 cts.; Ohio, barrel, 24@25cts.

FERTILIZERS.—No change to note. We quote:

Peruvian Guano	$66	₮ ton of 2000 lbs	
Turner's Excelsior	55	₮ ton	"
Turner's Ammo. S. Phos	45	₮ ton	"
E. F. Coe's Ammo. S. Phos	55	₮ ton	"
Soluble Pacific Guano	50	₮ ton	"
Rasin & Co., Soluble Sea Island Guano	50	₮ ton	"
Rasin & Co., Ground Bone and Meat..	"		"
Rasin & Co., Ammonia, Potash and Bone Phosphate of Lime	"		"
Flour of Bone	60	₮ ton	"
John Bullock & Sons Pure G'd Bone	45	₮ ton	"
Whitman's phosphate	50	₮ ton	"
Bone Dust	45	₮ ton	"
Horner's Maryland Super Phos	50	₮ ton	"
Horner's Bone Dust	45	₮ ton	"
Dissolved Bones	60	₮ ton	"
Missouri Bone Meal	47	₮ ton	"
New Jersey Ground Bone	40	₮ ton	"
Moro Phillips' Super-Phosphate Lime	50	₮ ton	"
"A A" Mexican Guano	30	₮ ton	"
"A" do. do	30	₮ ton	"
Plaster	$1.75	₮ bbl.	

FRUITS DRIED.—Cherries, 26@28 cents; Blackberries, 9@9½ cts; Whortleberries, 16 cts; Raspberries, 33@34 cts; Peaches, peeled, bright, 20@25 cts; Peaches, unpeeled, halves, 8@9 cts; Peaches, unpeeled, quarters, 6@7 cts; Apples, sliced, bright, 9@12 cts; Apples, quarters, bright, 6@7 cts.

FLOUR.—Market Active—Super $4.25@4.50; Extra 4.75@5.25; Western Family 5.37@5.25; Choice family, $8 25.

GRAIN—*Wheat*—Quiet, fair to choice, white, 1.10@1.30; fair to choice, red, 1.10@1.20. *Corn*—Southern white, 78@79—Yellow do 78@80→Western mixed 79@80 cts. *Oats*—67@68 cts.

HAY AND STRAW.—Timothy Hay, dull, at $18@$21 per ton; Rye Straw $13@14; Oat Straw 12@14; Wheat Straw $10.00@12.00.

HIDES.—Green 9@10 cts.; Dry salted 13@14 cts.; Dry Flint 15@18 cents.

PROVISIONS—Bacon Shoulders, 8½ cts.; Clear Rib Sides, 10@10½ cts.; S. C. Hams, 14@15cts.

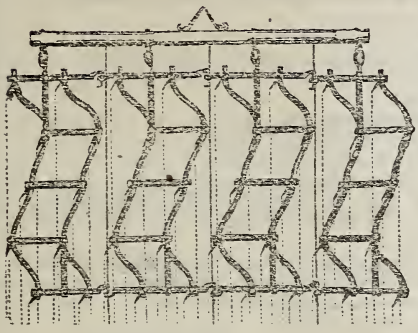
POTATOES.—Early Rose $3.25 per Barrel.

RICE.—Carolina and Louisiana, 7@7½cts.

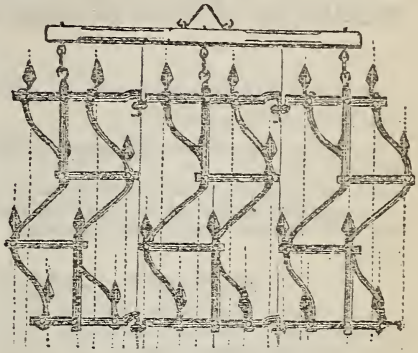
SALT.—Ground Alum $1.05@1.15; Fine $1.95@2.10 per sack; Turks Island 30@32 cts. per bushel.

WHISKEY.—$1.00 per gallon.

Nothing Succeeds like Success, based upon Real Merit.



HARROW.



CULTIVATOR.

COLTON'S

All Iron and Steel

HARROWS & CULTIVATORS

Were never advertise and pushed for sale at distant markets, until five years experience and use among home and near-by buyers had demonstrated them to be beyond question

Pre-eminently Superior in Quality of Work and in Durability.

Within the last three years the demand has wonderfully increased and sales have been made to parties at all points between the Gulf of Mexico and St. Lawrence and the far West. During the past Summer and Fall another factory was erected and a duplicate set of machinery placed therein, the original set having been especially designed for making our implements. Since the first of December both establishments have been running on full time and will turn out during 1875 at least

6,000 All Iron and Steel Harrows and Cultivators,

THE MATERIAL FOR THAT NUMBER BEING ON HAND.

All things fairly considered these implements are the cheapest a farmer or planter can buy and will prove the most satisfactory in freedom from expenses for repairs; *there is not a particle of cast or malleable iron about either*, the material being entirely wrought iron and steel.

During the seven years of manufacture over 25,000 of Colton's All Iron and Steel Harrows and Cultivators have been sold; since the Spring of 1872, over 2,000 have been sold in New York.

This success is absolutely unapproached by any other Harrow and Cultivator on this Continent. Our Harrows have met in practical field trial with every competing implement of any general or even local reputation in Canada and New York AND WERE NEVER YET BEATEN UNDER ANY CIRCUMSTANCES WHATEVER AT A PUBLIC FIELD TRIAL; the Cultivator being a newer implement has not had many opportunities of competing practically but in the few instances where tried with others has been victorious each and every time.

[over]

THE MARYLAND FARMER.

For the Field, Orchard, Garden and Household.

ONE OF THE LARGEST, BEST & CHEAPEST IN THE COUNTRY.

$1.50 Per Annum, 5 Copies and Upwards $1 each.

THE MARYLAND FARMER is a thorough-going, reliable and practical journal, seduously devoted to the Practical Improvement of Agriculture, in the Field, Orchard and Garden; to the economical increase of the more Staple Crops, the production of the Finest Fruits and Vegetables, the cultivation of the rarest and most beautiful Flowers, the laying out and adornment of Lawns and Yards; the Improvement of Stock of all Kinds; the erection of the most Approved and Economical Buildings for the protection of man and beast, and to suggestions for lightening the labors and improving the administration of General Household Economy; containing occasionally a variety of Fine Engravings, illustrating the latest improvements in all departments, and a Calendar of Seasonable Suggestions, relating to Farm and Garden Work, appropriate to the period of its issue is of itself a fund of valuable information, whilst the issue of the year will make up a volume that no one interested in the cultivation of the soil should be without.

WHO WANTS IT?

Farmers Want It, because it exposes to them monthly, the results of the labor and investigations of hundreds of practical workingmen in the various departments of Agriculture, affording to their own exertions the light of universal experience as a guide.

The Gardener Wants It, for the valuable suggestions it contains in relation to his special department of labor, and as a means of keeping himself at all times posted as to what is doing in the way of introducing and propagating new and useful varieties of Vegetables.

The Fruit Grower will find it indispensable for the amount of useful information it contains in relation to the different varieties of Fruits—always increasing—their Mode of Cultivation, Propagation, Preservation, &c.

The Horticulturist Wants it, because he will find it a valuable auxiliary, as it contains many communications from practical men, upon this beautiful science, together with engravings and descriptions of whatever new varieties may be introduced.

The Stock Raiser Wants it, because in this department of Rural Pursuits there is nothing more important than to keep thoroughly apprised of the results of experiments for the improvement of Stock by Importation, Judicious Crossing, Treatment, &c., which are constantly noticed in its columns.

The Manufacturer Wants It, who is anywise interested in the production of Implements and Machinery for the Farm, as he will find in it plates and thorough descriptions of all kinds of Agricultural Machinery, new and old, and thus keep himself apprised of the wants and improvements of his own field of labor.

The House-Keeper, cannot do *well* without it, because of the *new and valuable recipes* contained in every number for lightening the labors of the household, adding to their economy, and improving their practical results.

In fact there is no one who is at all interested in the pursuit of Agriculture, even to the extent of one-fourth of an acre, who will not reap information and improvement from its pages.

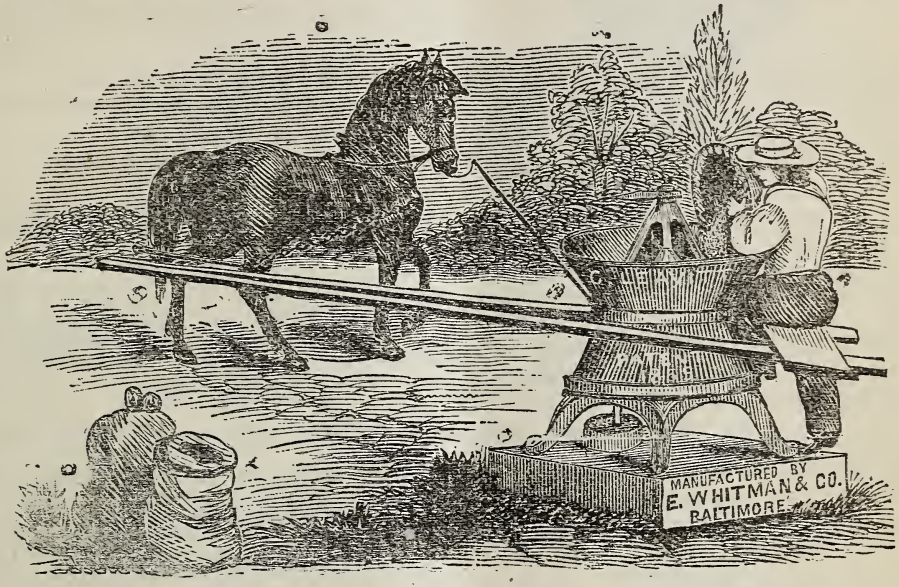
Advertisers will find it a valuable medium to reach customers in the city and country, as it circulates through this and the adjoining States. Specimen copies free on application.

Published by EZRA WHITMAN,

Office, No. 145 West Pratt Street, Baltimore,

Col. F. S. MILLS, Conducting Editor. Col. W. W. W. BOWIE, Associate Editor.

"YOUNG AMERICA"
CORN AND COB MILL.



The Young America Corn and Cob Mill, which so far surpasses all others, has been improved and made stronger than ever, and is now in the field, carrying everything before it. We annex a list of the Premiums it has received over the Double Cylinder, Little Giant, Magic Mill, Star Mill, Maynard's Mill, and all others that have come into competition with it.

First Premium at New York State Fair.
" " " Ohio "
" " " Michigan "

First Premium at N. Carolina State Fair.
" " " Nashville, Tenn., Fair.
" " " Ten County Fairs in Inda.

PRICE $50.

TRIAL OF CORN AND COB MILLS AT THE NORTH CAROLINA STATE FAIR.

The following Table shows the Time occupied by each of the Mills on Exhibition in Grinding half a bushel of Corn and Cobs.

YOUNG AMERICA, 2 minutes and 40 seconds.
LITTLE GIANT, 4 " 45 "
MAGIC MILL, 6 "
SINCLAIR & CO 'S MILLS, 2 trials, average time, 6 minutes, 58 seconds.

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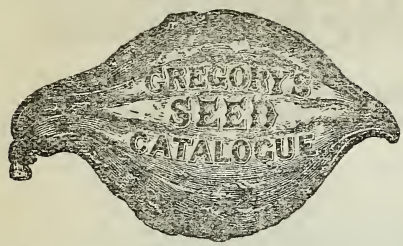

My annual catalogue of Vegetable and Flower Seed for 1875, will be ready by Jan. 1st for all who apply. Customers of last season need not write for it In it will be found several valuable varieties of new vegetables introduced for the first time this season, having made new vegetables a specialty for many years. Growing *over a hundred and fifty varieties* on my several farms, I would particularly invite the patronage of market gardeners and all others who are especially desirous to have their seed pure and fresh, and *of the very best strain.* All seed sent out from my establishment are covered by three warrants as given in my catalogue.

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Thomas' Fruit Culturist.

By JOHN J. THOMAS.

Every professional and amateur Horticulturist should have a copy.

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Address MARYLAND FARMER AGENCY,
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HUNTER'S and TRAPPER'S Illustrated Practical Guide to use and care of arms and ammunition; making and using traps, snares and nets; baits and baiting; poisons; bird lime; preserving, stretching, dressing, tanning and dyeing skins and furs; fishing, &c. With fifty engravings; 20 cts. Of Booksellers, or by mail.
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The American Sardine Co.'s Boneless Sardines, are much better, and less than half the cost of imported Sardines.

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☞*Advertisers will find it a valuable medium.*

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To Manufacturers and Farmers, and Agents for the Sale of Patent Rights.

HIGHLY IMPORTANT.

Farmers have long had improved implements, for plowing, harrowing, and raking hay; for seeding and planting grains, and sowing fine cultivators; for harvesting, threshing and cleaning grain, and most other kinds of work; but they have no improved machine for hauling-out and

SPREADING BARN-YARD MANURES;

and still have to do that hard, tedious work with fork and shovel by hand, and it is difficult to get it spread evenly, in that way.

But now I have invented, and here offer them, a new and useful implement, which will rapidly and easily *unload and spread the manure equally* over the land, as fast as the team walks and draws the wagon across the field; while the teamster has nothing to do but sit on the box and drive the team, and with a saving of more than half the labor; as it is well known that the greatest part of the labor is in unloading and spreading, the manure in the old way.

It is *effective, simple and cheap,* not costing more than $25 or $30, exclusive of the wagon or cart, on which it is drawn; and it may be used on any common farm wagon or cart; or a pair of wheels and axle may be made for it.

This implement was patented in August of this year; and Rights, to make and sell, in State or States, are now offered for sale, to manufacturers and others, at very low prices, as it was invented in the interest of farmers, and it is desired that they shall have the machine as low as possible—therefore, the patent right is offered very low.

The prices for Rights of States will be very low, as follows:

Rights for Illinois, Indiana, Kentucky, Michigan, Missouri, Maryland, New Jersey, New York, North Carolina, Ohio, Pennsylvania, and Virginia, will be sold for $500 each; or two of them together for $800. The other States will be sold for $300 each; or two of them for $500. Part cash and part good real estate will be received in payment for rights of States, as may be agreed upon.

This matter is truly worth the active attention of manufacturers, and those engaged in the sale of Patent Rights. Send for circulars, with descriptions, drawings, and further particulars—Address

COL. D. S. CURTISS,
Washington, D. C.

Oct. 1874. nov-4t

The Fruit Recorder and Cottage Gardener

3 MONTHS FREE.

will be sent FREE for 3 months to all who will pay postage at office of delivery. We do not ask any one to subscribe for our paper until they know what they are to get. *It speaks for itself.* Price only $1 per year. Our **SMALL FRUIT INSTRUCTOR** is a work of 64 pp. that tells in simple language just how to grow fruits in abundance for home use or market. Price 25 cts postpaid.

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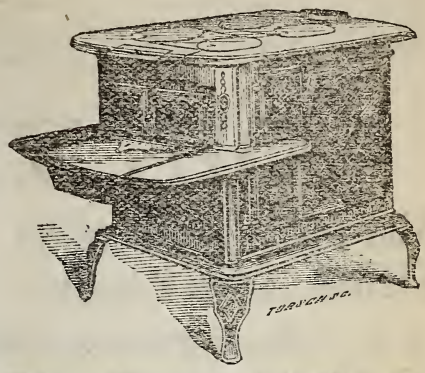

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The largest and best Cooking Stove in the market. Also manufacture and sell the VIRGINIA, VIRGIN QUEEN, WELCOME, SEA BIRD, and ADVANCE Cook Stoves, and a beautiful SIX-HOLE RANGE, with Warming Closet—No. 1 Baker; and a large variety of HEATING STOVES. Manufacturer and proprietor of the BEST FIRE-PLACE STOVES in the world—the "FAME," "REGULATOR" and "CHAMPION." Satisfaction guaranteed.

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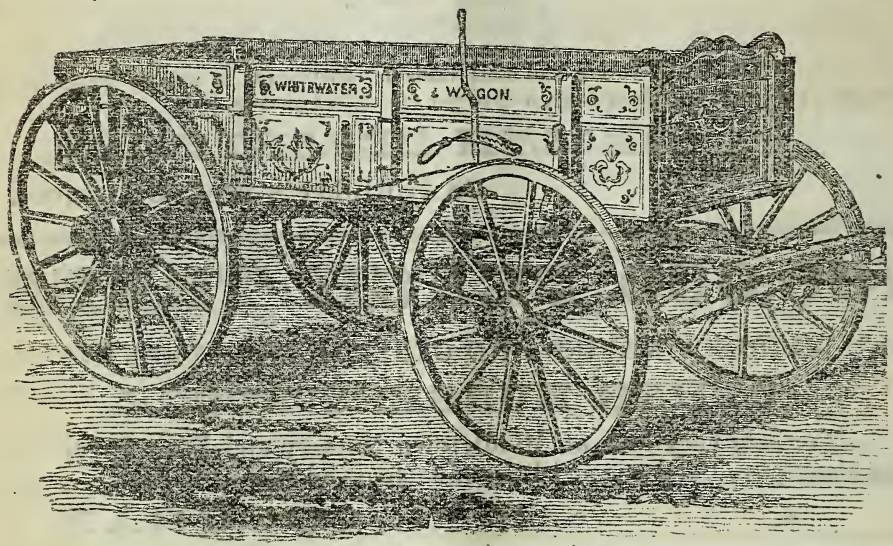
FARM AND FREIGHT WAGONS.



THIMBLE SKEIN.

		Capacity.
3 inch Thimble Skein, Light 2 Horse	$115 00	2500 lbs.
3¼ " " " Medium 2 Horse	120 00	3000 lbs.
3½ " " " Heavy 2 Horse	127 50	4000 lbs.
3¾ " " " 3 or 4 Horse	132 50	5000 lbs.
3¾ " " " for 4 Horses, with stiff tongue, pole and stretcher chains	142 50	5000 lbs.

The above are complete with whiffletrees, neck yoke, bed and top box, stay chains, &c.

IRON AXLE WAGONS.

1⅞ inch Iron Axle, Light 2 Horse	$120 00	2300 lbs.
1⅞ " " Medium 2 Horse	125 00	2800 lbs.
1⅞ " " Heavy 2 Horse	132 50	3500 lbs.
2 " " for 4 Horses, with stiff tongue, pole and stretcher chains,	150 00	5000 lbs.
2½ " " 4 " " "	170 00	7000 lbs.

The above are complete, with whiffletrees, neck yoke, bed and top box, stay chains, &c. *Brakes and Seats* furnished for either the Thimble Skein or Iron Axle Wagons at the following additional cost, viz:

Spring Seat, (with 2 steel springs) $6. Patent Brakes, $4. Lock Chain, $1

EVERY WAGON WARRANTED.

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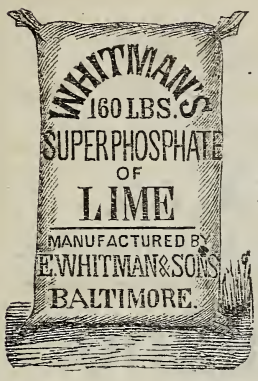

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MOST RELIABLE PHOSPHATE IN THE MARKET.

Price $50 Per Ton, in Sacks, of 160 pounds each.

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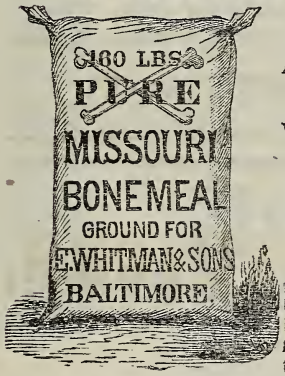

Analysis : Ammonia..... 4.38
Bone Phosphate of Lime.....49.51

Which is the highest analysis yielded by pure bone. The largest particles are smaller than timothy seed.

Price $48 Per Ton, in Sacks of 160 lbs. each.

CAUTION!

As some parties are offering as MISSOURI BONE MEAL other than the genuine article, we caution all persons that none is genuine unless the bags are branded as shown in the accompanying cut. Our Trade Mark is copyrighted, and we take the entire production of the Mill, and all infringements upon our copyright will be prosecuted to the full extent of the law. This article is perfectly pure, and has made a reputation for excellence never equaled by any Bone offered in this market. We do not claim that Bones ground in Missouri are any better than others, but we do claim that the Bone ground by OUR MILL is perfectly pure, and in unusually fine condition. "Missouri Bone Meal" is a name that we gave to designate this particular article; and to keep other dealers from palming off their goods upon those desiring the genuine Missouri Bone Meal, we have had our Trade Mark copyrighted.

New Jersey Ground Bone.

PRICE $40 PER TON.

We have sold hundreds of tons of this Bone, and it has invariably given satisfaction.

Peruvian Guano, South Carolina Bone (fine ground or dissolved,) Plaster, Sulphuric Acid, Potash, Sulphate of Soda, Nitrate of Soda, and all kinds of Fertilizer materials always on hand and for sale at the lowest market prices.

E. WHITMAN & SONS,

Dealers in Agricultural Implements and Garden Seeds,

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